BLM LIBRARY
88066228

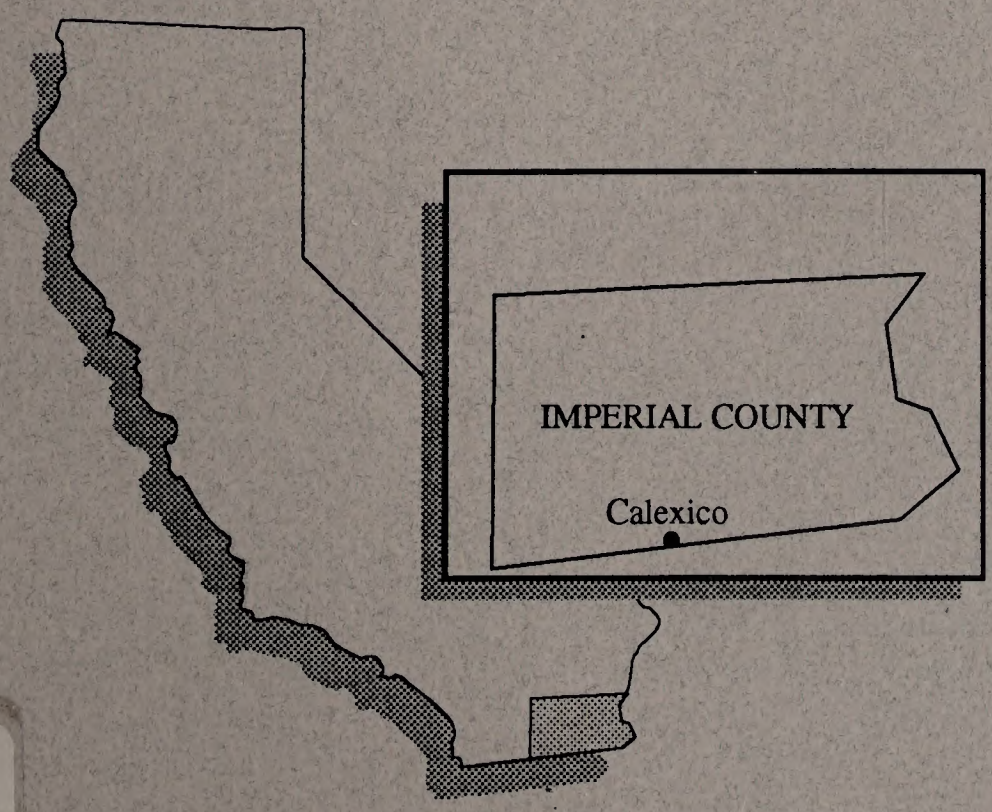
Modified Environmental Assessment No. CA-060-05-1

Southern California Gas Company Natural Gas Transmission Line 6902 Revised Border Crossing Location Imperial County, California

December 15, 1994

Prepared for:
Bureau of Land Management
California Desert District
U.S. Department of the Interior
6221 Box Springs Boulevard
Riverside, CA 92507-0741

Prepared by:
LSA Associates, Inc.
157 Park Place
Point Richmond, CA 94801
(510) 236-6810
LSA Project #SCG201A



HD
243
.C2
S68
1994

#32113703 ID88066228 HD 243 .C2 S68 1994

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
California Desert District Office
6221 Box Springs Boulevard
Riverside, California 92507-0714

IN REPLY REFER TO:

CA-30646
1790/2880
(CA-063.2)

DEC 1 5

Dear Reader:

In September 1993 we released, for review, an Environmental Assessment (EA). The purpose of that EA was to address the impacts of a proposed natural gas pipeline by the Southern California Gas Company. Part of this project involved a replacement of an existing line between Hayfield, in Riverside County, and Niland, in Imperial County and the remainder was to extend this line south through Imperial County to Mexico. The review period for that EA closed on November 5, 1993. As a result, in January 1994, we issued a Decision Record (DR) and Right-of-Way Grant which authorized the construction, operation and maintenance of that pipeline.

Subsequent to that DR, and as a result of Pemex's further evaluation of their existing gas system in Mexicali, B.C., Pemex has identified and requested another crossing point on the Mexico/United States Border, for a tie to facilitate the transfer of natural gas other than where the southern extension of Barbara Worth Road terminates at the Border. This new point is approximately 2.9 miles to the east of Barbara Worth Road.

The purpose of this Modified EA is to evaluate, in compliance with the National Environmental Policy Act (NEPA), the proposed change to the last 5.3 miles of Line 6902 which would facilitate the transfer of a maximum of 40 million cubic feet per day of natural gas to Mexico. Specifically, this change would involve a net increase of approximately 2.6 miles of 16-inch pipe which would be needed to meet the relocated border crossing location.

Please review, and send any written comments, by January 20, 1995 to:

USDI, Bureau of Land Management
ATTN: Stephen L. Johnson
6221 Box Springs Blvd.
Riverside, CA 92507-0741

It is important that we receive your comments in writing since no public meetings will be held. All comments received will be evaluated and considered in arriving at our decision. Those who comment on this proposed alteration to Line 6902, as addressed in this Modified EA, will be notified of my decision.

Sincerely,

Alan Stein

Henri R. Bisson ACTING
District Manager

TABLE OF CONTENTS

		PAGE
SUMMARY		iii
I.	INTRODUCTION	1
	A. PIPELINE SPECIFICATIONS	1
	B. REGULATORY CONTEXT	1
	C. PROJECT PURPOSE AND NEED	3
	D. JURISDICTIONAL AND PERMIT-GRANTING AGENCIES	4
II.	PROJECT DESCRIPTION	7
	A. PROJECT LOCATION	7
	B. NO-ACTION ALTERNATIVE	7
	C. RIGHT-OF-WAY AND LAND REQUIREMENTS	11
	D. PIPELINE CONSTRUCTION	11
	E. OPERATION AND MAINTENANCE	13
III.	ENVIRONMENTAL SETTING	15
	A. LAND USE	15
	B. SOCIOECONOMIC CONSIDERATIONS	15
	C. VISUAL RESOURCES	15
	D. TRAFFIC	15
	E. VEGETATION AND WILDLIFE	16
	F. GEOLOGY, SOILS, AND SEISMICITY	17
	G. HYDROLOGY	18
	H. NOISE	18
	I. AIR QUALITY	20
	J. CULTURAL RESOURCES	20
	K. PALEONTOLOGICAL RESOURCES	21
	L. HEALTH AND SAFETY	21
IV.	POTENTIAL IMPACTS AND MITIGATION MEASURES	23
	A. LAND USE	23
	B. SOCIOECONOMIC CONSIDERATIONS	24
	C. VISUAL RESOURCES	25
	D. TRAFFIC	26
	E. VEGETATION AND WILDLIFE	27
	F. GEOLOGY, SOILS, AND SEISMICITY	30
	G. HYDROLOGY	32
	H. NOISE	33
	I. AIR QUALITY	36
	J. CULTURAL RESOURCES	39
	K. PALEONTOLOGICAL RESOURCES	40
	L. HEALTH AND SAFETY	41

V. CUMULATIVE IMPACTS AND GROWTH INDUCEMENT 44
A. INTRODUCTION 44
B. REGIONAL DEVELOPMENT 44
C. CUMULATIVE IMPACTS 46
D. GROWTH INDUCEMENT 48

VI. REFERENCES 49
A. LITERATURE CITED 49
B. PERSONS CONTACTED DURING REPORT PREPARATION 50
C. PERSONS PARTICIPATING IN THE PREPARATION OF THIS REPORT 52

APPENDICES

A. FERC REPORT
B. PEMEX ANNOUNCEMENTS
C. POTENTIALLY OCCURRING SPECIAL STATUS
D. TERRESTRIAL VERTEBRATE SPECIES OBSERVED

LIST OF FIGURES

PAGE

1 - Regional Project Vicinity 2
2 - SoCalGas Natural Gas Pipeline 6902 8
3 - Project Location 9
4 - Meter Station Location 10
5 - Regional Geology and Seismicity 19
6 - Noise Levels Typical of Construction Equipment 35

LIST OF TABLES

PAGE

Table 1 - Comparison Between Original and Revised Project vi
Table 2 - Environmental Impact Summary vii
Table 3 - Regulatory Context 5
Table 4 - Construction Phase Air Pollutant Emissions 38

LIST OF FIGURES

PAGE

Figure 1 - Regional Project Vicinity 2
Figure 2 - SoCalGas Natural Gas Pipeline 6902 8
Figure 3 - Revised Project Location 9
Figure 4 - Revised Border Crossing Location 10
Figure 5 - Regional Geology and Seismicity 19
Figure 6 - Noise Levels Typical of Construction Equipment 35

LIST OF TABLES

PAGE

Table 1 - Comparison Between Original and Revised Project vi
Table 2 - Environmental Impact Summary vii
Table 3 - Regulatory Context 5
Table 4 - Construction Phase Air Pollutant Emissions 38

SUMMARY

This Modified Environmental Assessment (EA, No. CA-060-05-1) is for a revision to the international border crossing at the southern terminus of the already permitted Southern California Gas Company (Gas Company) line 6902.

Pipeline Specifications. This revision to the 77.6-mile-long line 6902 would increase net mileage 2.6 miles and move the border crossing 2.9 miles to the east. The 5.3-mile-long revised segment would use 16-inch-diameter pipe and have a maximum capacity of 40 million cubic feet per day.

Original EA. *Environmental Assessment: Southern California Gas Company Natural Gas Transmission Line 6902 Project, Riverside and Imperial Counties* (LSA 1993) was prepared for the U.S. Bureau of Land Management (BLM) and issued in September 1993. The original EA for line 6902 is included by reference.

Regulatory Context. The BLM, California Desert District in Riverside, California, was the lead National Environmental Policy Act (NEPA) agency for the original EA. The U.S. Marine Corps in Yuma, Arizona, and the U.S. Department of the Navy in San Diego, California, were the cooperating agencies. The Decision Record (CA-30646) was issued on February 3, 1994.

The Gas Company seeks authorization under Section 3 of the Natural Gas Act from the Federal Energy Regulatory Commission (FERC) for the revised border crossing portion. The upstream facilities are subject to the jurisdiction of the California Public Utilities Commission (CPUC). California Environmental Quality Act (CEQA) review of this modified project is not required, because no discretionary actions would be required from state or local agencies.

Project Purpose. As originally approved, the project would supply natural gas to future customers south of the international border in the Mexicali area as well as to customers in the Calexico area north of the border. The border crossing location was revised at the request of Pemex, the primary customer.

Route. The revised route to the revised border crossing would originate at the intersection of Barbara Worth and Jasper roads. The pipeline would traverse east along the north side of Jasper Road to Anderholt Road, turn south to Carr Road, turn east and cross the Ash Main Canal and the South Alamo Canal, turn south along the east side of the South Alamo Canal to the All American Canal, and then turn east for approximately 400 feet. Then the pipeline would turn south, boring under the All American Canal and terminating at the U.S.-Mexico international border.

A meter and valve station (100 by 50 feet) would be constructed due east of the Port of Entry and north of the All American Canal.

Comparison to Original. Net environmental effects of the revised project would roughly duplicate those of the equivalent terminal segment of the original project. No significant differences in impacts were detected between the two versions. Both versions would traverse through largely agricultural areas along county road and canal easements.

Table 1 compares the original and revised border crossings. In terms of this Modified EA, the southern terminus of the original project is the same as the No-Action Alternative.

Impacts and Mitigations. The revised pipeline alignment would be entirely within existing disturbed areas, such as county road and canal rights-of-way. Most project impacts would be associated with construction and would be temporary. All impacts would be mitigated to below the level of significance. No cumulatively significant impacts have been identified.

Table 2 summarizes potential impacts and mitigation measures associated solely with the revised border crossing location segment. These impacts are not additive to those cited in the original EA, but are delineated here to illustrate the impacts of the revised border crossing phase of the pipeline project.

Table 1 - Comparison Between Original and Revised Projects
SoCalGas Line 6902 Revised Border Crossing Location
Imperial County, California

Factor	Original Project (southern terminus)	Revised Project	Net Effect of Revised Project
Length	2.7 miles	5.3 miles	2.6 miles additional
Diameter of pipe	24 inches (in ROW Grant; 36 inches in original EA)	16 inches	56% reduction per mile of hydrostatic test water; net 13% reduction.
Trench dimensions	36 inches wide 66 inches deep	28 inches wide 58 inches deep	32% reduction per mile of trench volume; net 34% increase.
Working strip width	75 feet	50 feet	33% reduction
Area affected	24.5 acres	32.1 acres	7.6-acre increase
Construction time	10 to 12 weeks for southern 44.5 miles	8 weeks for 5.3 miles	Undetermined or reduction
Sensitive receptors	1 restaurant and 4 residences	11 residences	Increase of 7 residences; no restaurant.
Work crew	50	25	50% reduction
Temporarily affected agricultural land	Maximum 8.7 acres	Maximum 7.6 acres	1.1-acre reduction
Major canal crossings	Bore All American	Bore All American	Equivalent
Secondary canal crossings	Trench through Alamitos and New Briar canals	Span over Ash Main and South Alamo canals	Equivalent or reduction
Burrowing owls detected	3	8	Increase of 5

Table 2 - Environmental Impact Summary
SoCalGas Line 6902 Revised Border Crossing Location
Imperial County, California

Environmental Category	Potential Impacts	Mitigation Measures	Impacts (Before Mitigation/After Mitigation)
A. LAND USE	Construction would disturb a maximum total of 7.6 acres of agricultural land for up to two months.	Working strip shall be confined to existing road and canal easements; valve/meter station in a canal easement; reimburse farmers.	Not significant/not significant.
	Traffic, visual, and noise impacts would occur to 11 rural residences along the route during construction.	See Traffic, Visual, and Noise sections.	Significant short-term/not significant.
B. SOCIO-ECONOMIC	Population in Imperial County would increase by up to 25 people during the construction period.	None required.	Not significant/not significant.
	Project would create 25 jobs for pipeline workers for up to two months.	None required.	Not significant/not significant.
	Construction crew would decrease available temporary housing by up to 2% for up to two months.	Workers would rent houses or trailers in addition to hotels.	Not significant/not significant.
	Local trade would increase temporarily.	None required.	Not significant/not significant.
C. VISUAL RESOURCES	Construction debris could degrade appearance of working strip.	Gas Company shall clean up debris and conduct follow-up inspections.	Locally potentially significant/not significant.
	Construction removal of ruderal vegetation would alter site's appearance.	Vegetation removal shall be minimized.	Not significant/not significant.

Environmental Category	Potential Impacts	Mitigation Measures	Impacts (Before Mitigation/After Mitigation)
	Pipeline valves and meters would be visible above ground.	Exposed facilities shall be painted earthtone color.	Locally potentially significant/not significant.
D. TRAFFIC	Minor short-term construction-related traffic delays and minor increases in peak-hour congestion.	Gas Company to provide appropriate signage, protection of open trenches, and repairs to affected roadway.	Locally significant/not significant.
E. VEGETATION AND WILDLIFE	Potential harassment of wildlife by pets; collection or destruction of native plants and wildlife.	Pets on-site and collection or destruction of native plants or wildlife shall not be allowed.	Significance undetermined/ not significant.
	Vehicle activity and placement of storage areas in sensitive habitat off of the working strip.	Construction shall be confined to cleared, designated construction zone. Storage areas shall be confined to cleared, non-sensitive habitat.	Significant/ not significant.
	Entrapment of wildlife in pipes.	Pipe shall be inspected before moving.	Significant/ not significant.
	Attraction of wildlife by improper deposition of trash; introduction of hazardous materials; construction debris on-site.	Proper disposal of trash. Proper handling of hazardous materials. Post-construction cleanup.	Significance undetermined/ not significant.
	Accidental fires.	Fire management plan shall be prepared.	Significance undetermined/ not significant.
	Discharge of hydrostatic test water in sensitive habitat.	Hydrostatic test water shall be discharged into cleared, non-sensitive habitat.	Significant/ not significant.

Environmental Category	Potential Impacts	Mitigation Measures	Impacts (Before Mitigation/After Mitigation)
	Take of adult burrowing owls and destruction of nests with juveniles and eggs.	Conduct a preconstruction survey to identify owls/ nests at risk. In nonbreeding season, install one-way doors on nests and fill other burrows at risk. In breeding season, fill empty burrows at risk and avoid destruction of active nests. A worker education program shall be implemented for each of the above topics.	Significant/not significant.
G. GEOLOGY, SOILS, AND SEISMICITY	Pipeline would be subject to corrosive soils.	Pipeline coating and cathodic protection to protect pipe.	Significant/not significant.
	Spoil piles along trenches would be subject to erosion for up to two months.	Gaps in spoil piles shall be provided to allow for adequate drainage.	Short-term significant/not significant.
H. HYDROLOGY	Hydrostatic test water would be discharged by spreading or returned to canals after use.	Water shall be disposed of in a manner acceptable to RWQCB and county.	Not significant/not significant.
	Discharge of hydrostatic test waters could cause erosion of unlined canal.	Rate of discharge water shall be controlled and erosion control measures shall be employed.	Locally significant/not significant.
I. NOISE	Short-term construction noise would likely exceed county CNEL standards for 1-3 days and cause disturbance to the eight rural residents along the route.	Inform noise receptors of pipeline schedule, minimize use of loud signals, and muffle equipment.	Locally significant/not significant.

Environ-mental Category	Potential Impacts	Mitigation Measures	Impacts (Before Mitigation/After Mitigation)
	Annual blowdown events at venting locations would cause short-term disturbance for the local residents and future Port of Entry facility.	Silencer shall be used.	Locally significant/not significant.
J. AIR QUALITY	Project construction, vehicles, and equipment emissions would exceed NOx and PM_{10} daily and quarterly thresholds.	Incorporate fugitive dust control measures; maintain equipment; use electric equipment instead of internal combustion power equipment, as feasible; use gasoline powered instead of diesel equipment where feasible.	Locally significant/not significant.
K. CULTURAL RESOURCES	Historic or prehistoric resources not expected to be encountered.	If sensitive resources are encountered, excavation shall stop. The finds shall be evaluated and a data recovery program shall be implemented, if required.	Not significant/not significant.
L. PALEONTO-LOGICAL RESOURCES	Significant paleontological resources are not expected to be encountered.	If significant paleonto-logical resources are encountered, excavation shall stop, finds shall be evaluated, and mitigated.	Not significant/not significant.

I. INTRODUCTION

This Modified Environmental Assessment (EA, No. CA-060-05-1) is for the Southern California Gas Company (Gas Company) Natural Gas Transmission Line 6902 project. The Gas Company proposes to revise the terminus of the approved route and extend facilities to the U.S.-Mexico border to supply natural gas to Mexicali, Mexico, and vicinity (Figure 1).

A. *PIPELINE SPECIFICATIONS*

This Modified EA is for a revision to the international border crossing at the southern terminus of the already permitted 77.6-mile long line 6902. Net mileage for the entire line 6902 project would increase 2.6 miles (i.e., a 5.3-mile addition and a 2.7-mile reduction). The pipeline would be 16-inches in diameter. The initial capacity of the line would be 40 million cubic feet (MMcf) per day at the international border.

B. *REGULATORY CONTEXT*

This Modified EA has been prepared in compliance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA, and the BLM Handbook for NEPA (BLM 1988).

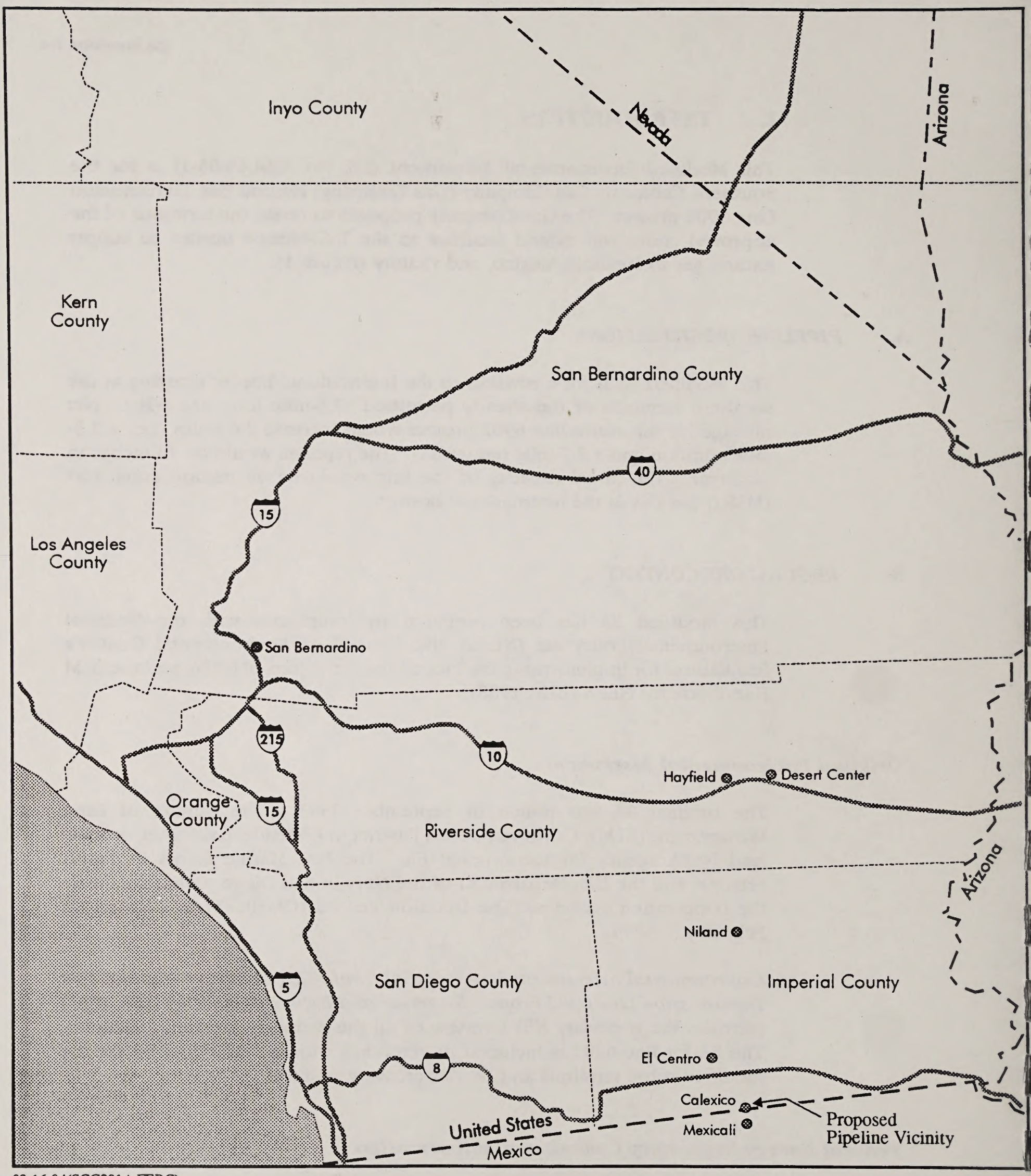
Original Environmental Assessment

The original EA was issued in September 1993. The Bureau of Land Management (BLM), California Desert District in Riverside, California, was the lead NEPA agency for the original EA. The U.S. Marine Corps in Yuma, Arizona, and the U.S. Department of the Navy in San Diego, California, were the cooperating agencies. The Decision Record (CA-30646) was issued on February 3, 1994.

Environmental Assessment: Southern California Gas Company Natural Gas Transmission Line 6902 Project, Riverside and Imperial Counties (LSA 1993) provides the necessary NEPA review of all the proposed upstream facilities. The EA for line 6902 is included by reference with this Modified EA for the modified route terminus and border crossing facilities.

Federal Energy Regulatory Commission Authorization

The Gas Company is seeking authorization under Section 3 of the Natural Gas Act from the Federal Energy Regulatory Commission (FERC) for the revised border crossing location portion of the project. (For further explanation, see Appendix A for the FERC Report published in the *Federal Energy Guidelines*



09-16-94(SCG201A FERC)

Figure 1

N

LSA

Scale in miles

0 4.5

Regional Project Vicinity
SoCalGas Line No. 6902 Revised Border Crossing

formally approving the Natural Gas Act Section 3 authorization and issuing a Presidential Permit to the Gas Company to construct and operate the original revised border crossing facilities.)

California Public Utilities Commission

The Gas Company is a California public utility subject to the jurisdiction of the California Public Utilities Commission (CPUC). Upstream facilities are subject to the jurisdiction of the CPUC.

California Environmental Quality Act

California Environmental Quality Act (CEQA) is the state equivalent of NEPA. This revised border crossing location portion of the project will not require any discretionary permits from any state or local jurisdictions (Harris pers. comm.). Accordingly, it does not require review under CEQA. It should be noted that, in most respects, CEQA environmental review requirements are similar to NEPA requirements.

C. PROJECT PURPOSE AND NEED

The location of where line 6902 would cross the international border would be moved 2.9 miles to the east. This revision is proposed to satisfy the requirements of the primary customer, Pemex (Petroleos Mexicanos). The Gas Company and Pemex have entered into a memorandum of agreement on this project. Pemex has designated the crossing point and surveyed the precise location on the ground. Dr. Jose Aberra, head of Pemex, formally announced the agreement with the Gas Company to construct the border crossing project on August 18, 1994. (See Appendix B for the Project Vecinos announcement, Pemex's letter indicating the new crossing point, and the accompanying map.)

International Load

The revised border crossing location portion of the project would connect the Gas Company's system with facilities to be built in Mexico and operated by Pemex. Pemex is the state-owned oil and gas corporation in Mexico. Pemex has the responsibility for the transportation of natural gas within Mexico. The revised border crossing would serve existing and new natural gas requirements in the Mexicali area of Mexico. Natural gas is not presently served to the Mexicali area. The revised border crossing would interconnect through Pemex with the facilities of Gas B.P., which provides local distribution service of propane-air to mainly residential users in Mexicali.

The substitution of natural gas for propane-air would permit the removal from service of propane storage tanks, which are located in a densely populated

area and which currently are of concern to the citizens of Mexicali (Gilmore pers. comm.). Many of the existing industrial facilities in Mexicali currently burn number six fuel oil or an equivalent product. Use of natural gas would potentially reduce the emission of sulphur and other pollutants that currently migrate from the Mexicali area into southern California resulting from the use of fuel oil in Mexicali (Gilmore pers. comm.).

Domestic Load

In addition to supplying natural gas to Mexico, the proposed modification would have the capacity to supply potential customers in the vicinity of the U.S. Port of Entry.

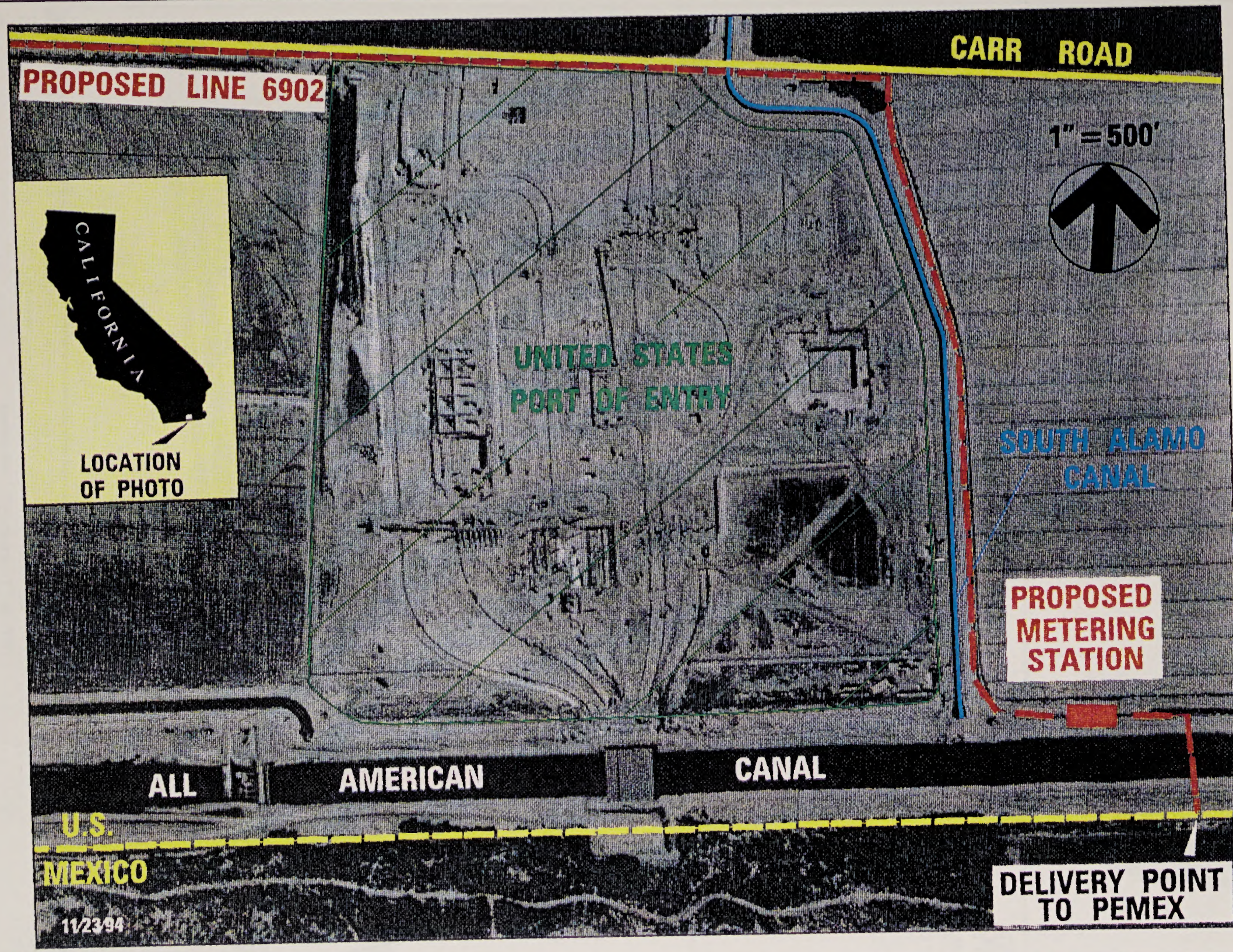
D. JURISDICTIONAL AND PERMIT-GRANTING AGENCIES

The resources potentially affected by the revised border crossing location portion of the project fall under the jurisdiction of the agencies and regulations described in Table 3. The revised border crossing portion of the project as proposed, incorporating the mitigation measures, is designed to be consistent with the applicable agency regulations.

Table 3 - Regulatory Context
SoCalGas Line 6902 Revised Border Crossing Location
Imperial County, California

International Agencies	Jurisdictional Responsibilities/Permit Requirements
International Boundary and Water Commission (IBWC)	• Approval of siting facilities crossing the international boundary. Easement for border crossing.
Federal Agencies	**Jurisdictional Responsibilities/Permit Requirements**
U.S. Fish and Wildlife Service (USFWS)	• If threatened and/or endangered species are affected, Incidental Take Permit under Section 7 of the federal Endangered Species Act will be sought.
Federal Energy Regulatory Commission (FERC)	• Authority pursuant to Section 3 of the Natural Gas Act for the siting, construction, operation, and maintenance of border crossing facilities.
U.S. Immigration and Naturalization Service (INS)/Border Patrol	• Coordination with INS regarding construction along the international border, particularly crossing the patrol road used by INS. Easement for the southerly 30 feet of the project to the international border.
U.S. Bureau of Reclamation	• Crossing easement for All American Canal (in coordination with the Imperial Irrigation District).
Office of the President	• Presidential Permit for the siting, construction, operation, and maintenance of border crossing facilities. Permit to be issued following the approval of the Department of State, the Department of Energy, and the Department of Defense.
State Agencies	**Jurisdictional Responsibilities/Permit Requirements**
California Public Utilities Commission (CPUC)	• CPUC approval is required for the rates and terms of service of the gas transportation through the proposed pipeline.
	• CPUC has authority over the safety practices and utility equipment that would be used in constructing the pipeline.
California Department of Fish and Game (CDFG)	• If threatened and/or endangered species are affected, Section 2081 management permit will be sought. Alternatively, the Department may adopt the federal Biological Opinion as the written findings required pursuant to Section 2090 of the Fish and Game Code.
	• Section 1603 Streambed Alteration Agreement for stream crossings, if needed.

California Department of Transportation (Caltrans)	•	Roadway encroachment permit for Highway 98 crossing.
State Historic Preservation Office (SHPO)	•	Coordinate through the BLM to fulfill the requirements of Section 106 of the National Historic Preservation Act.
Local/Regional Agencies and Organizations		**Jurisdictional Responsibilities/Permit Requirements**
Imperial County Public Works Department	•	Roadway Encroachment Permits.
Imperial Irrigation District (IID)	•	Crossing Permit for Ash Main Canal, All American Canal, South Alamo Canal, and numerous other smaller canals, laterals, and drains.



Source: Southern California Gas Company

12-19-94(SCG201A)

Figure 4

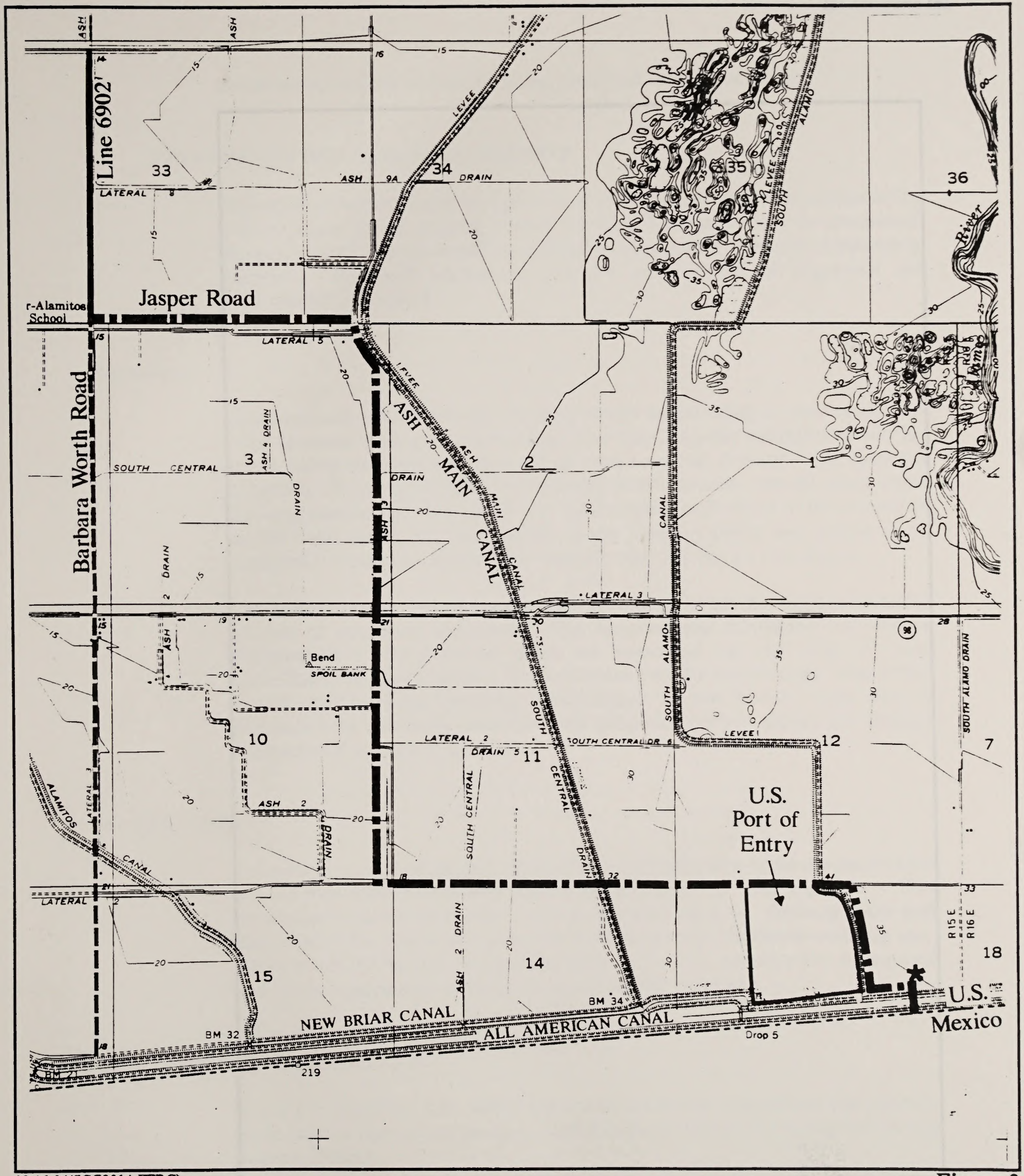
N

LSA

Scale in feet

0 500

Revised Border Crossing Location



09-16-94(SCG201A FERC)

Figure 3

N

LSA

Scale in feet

0 2500

Approved Line 6902 (eliminated by revised project)

Approved Line 6902 Route (planned)

Revised Line 6902 Route

Meter/Valve Station

Project Location
SoCalGas Line 6902
Revised Border Crossing

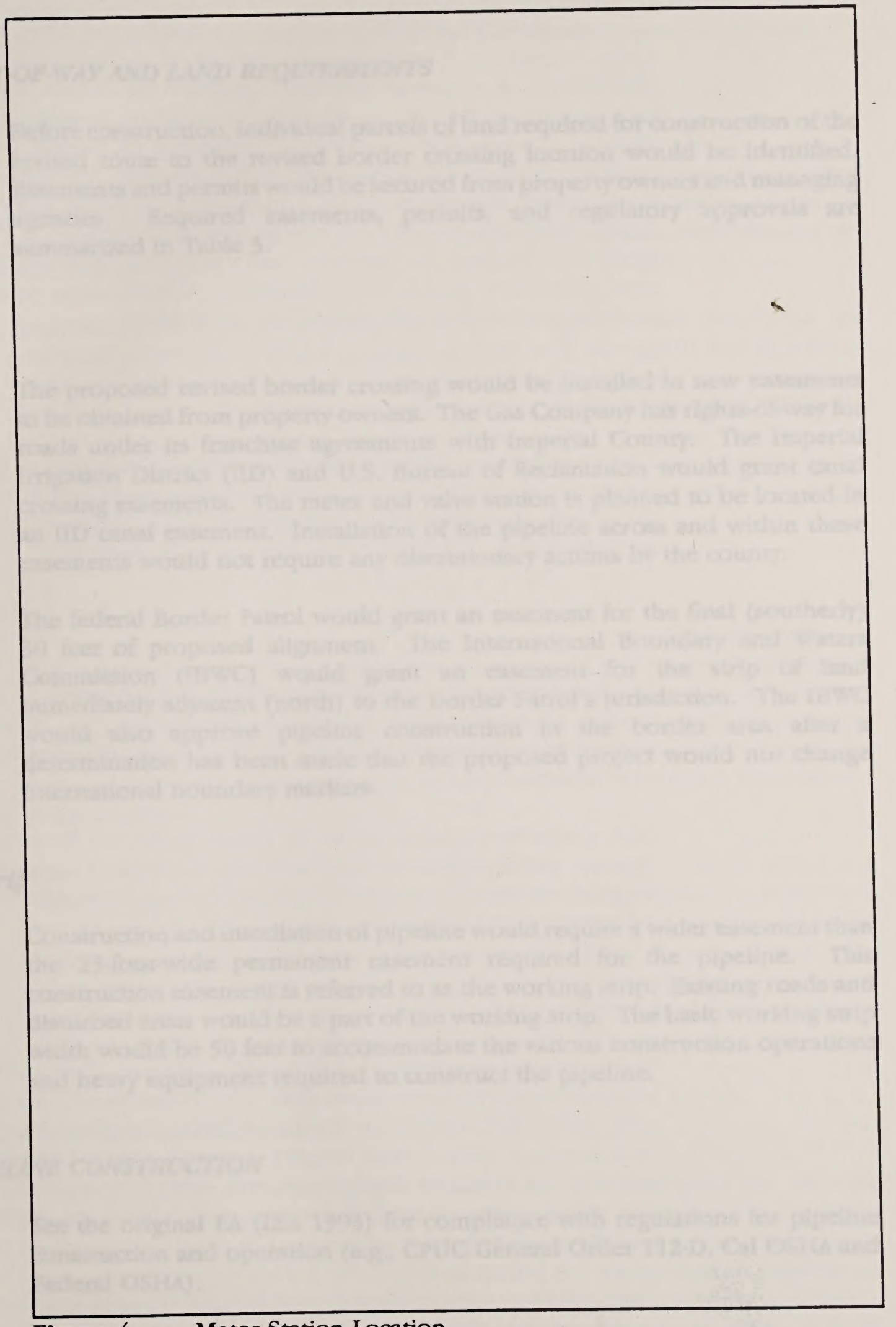


Figure 4 - Meter Station Location

necessary in Mexico to meet existing peak and future demands.

C. RIGHT-OF-WAY AND LAND REQUIREMENTS

Before construction, individual parcels of land required for construction of the revised route to the revised border crossing location would be identified. Easements and permits would be secured from property owners and managing agencies. Required easements, permits, and regulatory approvals are summarized in Table 3.

Easements

The proposed revised border crossing would be installed in new easements to be obtained from property owners. The Gas Company has rights-of-way for roads under its franchise agreements with Imperial County. The Imperial Irrigation District (IID) and U.S. Bureau of Reclamation would grant canal crossing easements. The meter and valve station is planned to be located in an IID canal easement. Installation of the pipeline across and within these easements would not require any discretionary actions by the county.

The federal Border Patrol would grant an easement for the final (southerly) 30 feet of proposed alignment. The International Boundary and Waters Commission (IBWC) would grant an easement for the strip of land immediately adjacent (north) to the Border Patrol's jurisdiction. The IBWC would also approve pipeline construction in the border area after a determination has been made that the proposed project would not change international boundary markers.

Working Strip

Construction and installation of pipeline would require a wider easement than the 25-foot-wide permanent easement required for the pipeline. This construction easement is referred to as the working strip. Existing roads and disturbed areas would be a part of the working strip. The basic working strip width would be 50 feet to accommodate the various construction operations and heavy equipment required to construct the pipeline.

D. PIPELINE CONSTRUCTION

See the original EA (LSA 1993) for compliance with regulations for pipeline construction and operation (e.g., CPUC General Order 112-D, Cal OSHA and Federal OSHA).

Labor and Equipment

Approximately 25 people constitute a construction crew or "spread." One spread would be employed. (A total of 50 people were projected in the original EA.) A minimum pipeline inspection force from the Gas Company of four people would also be required throughout pipeline construction. The pipeline construction contractor is expected to recruit at least half of the necessary labor from the southern California area. The remainder of the labor force would come from across the country. Construction personnel would commute to the work site daily from interim residences in the Imperial Valley area. Gas Company employees would come from the existing bases within the service territory in southern California. Construction equipment would be same as described in the original EA (LSA 1993).

Construction Schedule

Construction would be scheduled to begin in the spring of 1995 and take two months to complete. Construction activities would generally be from Monday through Friday. Typically, construction work would not take place outside daylight hours. Weekend work may occur as needed.

Staging Area

Pipeline construction would require the establishment of a staging area for storage of construction materials. The staging area would be an unused portion of an industrial facility or the Gas Company's existing corporation yard in El Centro.

Pipe would be transported to the construction site by truck from a railhead station. Other materials required for construction, such as valves, fittings, and support equipment would be supplied to the contractors from a supply point designated by the Gas Company.

Construction Methods

The pipe used would be 16-inch outside diameter (O.D.), grade X-52 low alloy steel, and wall thickness 0.266 inch. The thickness of the pipe would conform with CPUC General Order Number 112-D. Overland installation of the 16-inch-diameter pipe would require a trench approximately 28 inches wide, allowing six inches of clearance on each side of the pipe. Approximately three feet of clearance is needed on each side where the pipeline makes major directional changes.

Although the pipeline is proposed for construction in the roadway shoulder, some pavement disruption would likely occur. The Gas Company would repave any pavement disturbed in project construction. The width of the

working strip would be 50 feet. Centerlines and outside borders of the working strip would be staked. Mechanical trenching machines would be used. If use of these machines is not feasible, a backhoe would be used.

Canal Crossings

Figure 3 illustrates the proposed canal crossings. The pipeline would span over the Ash Main Canal and South Alamo Canal. The pipeline would be bored under the All American Canal, avoiding the canal's embankment on either side.

Avoidance of the minor drainage ditches and canal laterals would be the preferred procedure. Where clearance is sufficient, the pipeline would cross these minor irrigation facilities by trenching over the siphon, but avoiding the irrigation facility. The pipeline alignment would also be moved from one side to the other of the county roads to avoid minor drainage facilities. If avoidance would not be possible by trenching above the siphon or by realignment of the pipeline route within the road easement, minor drainage ditches and canal laterals may be trenched through.

Pressure Testing

After construction is completed, the pipeline would be hydrostatically tested by filling the line with water and pressurizing the pipe to a predetermined level greater than 1,400 pounds per square inch (psi) to verify its integrity. Approximately 215,000 gallons (0.7 acre-feet) of water would be required for hydrostatic testing. This test water would most likely be drawn from a local irrigation canal.

After completion of hydrostatic testing, the test water would be evacuated from the pipe segment by forcing an inflatable rubber cylinder (known as a pig) down the line with natural gas. The test water would either be discharged by spreading and percolation/evaporation in accordance with appropriate local, state, and federal regulations or returned to an irrigation canal for reuse. For spreading, the rate of discharge of the test water would be controlled to prevent erosion of local terrain.

E. OPERATION AND MAINTENANCE

Operation and maintenance procedures already established by the Gas Company would apply to this revised project. These procedures incorporate the requirements of appropriate federal, state, and local codes, regulations, and ordinances. Included are U.S. Department of Transportation regulations contained in 49 CFR, Part 192, the California Occupational Safety and Health Act, and CPUC General Order 112-D. Maintenance activities include

inspection, monitoring, and repair of cathodic protection equipment and valves along with regular patrols on the pipeline.

Cathodic Protection

Testing the cathodic protection involves driving along the pipeline and monitoring the status of the equipment. One new rectifier would be installed at the proposed valve and meter station at the southern terminus of the proposed alignment. The rectifier would require routine maintenance. Meters would be read on a quarterly basis to check the voltage on the cathodic protection and to adjust if needed. All ETS (electric test stations) would be read annually.

Inspections

The proposed pipeline would be serviced along existing county and IID levee roads. The meter and valve station would be visited semi-annually at a minimum to inspect and test the automatic line break controls. Valves would be greased and manually operated not less than once a year. Inspection of the pipeline would be accomplished by semi-annual vehicle surveys. The line would be surveyed with leakage detection equipment every year.

Blowdowns

"Blowdowns" are ventings of natural gas either during routine maintenance procedures, pipeline construction and relocation, or for emergency purposes. As part of the annual valve station inspection and maintenance procedures, natural gas is vented from a pipe at the valve station, for approximately one minute. This relief of pressure allows the Gas Company to conduct necessary inspection and maintenance. The valves are remotely opened by the maintenance crew at a distance of approximately 30 feet from the valve station. The gas is vented from stacks eight to ten feet high. Prior to non-emergency venting, the Gas Company notifies all local authorities, airports, and fire departments as to when and where venting would occur and informs them of the typical noise and odors associated with the procedure.

III. ENVIRONMENTAL SETTING

A. LAND USE

The proposed revised border crossing is east of Calexico, California, and north and east of Mexicali, Mexico (Figure 1). Nearby land uses consist of agriculture, fallow land, and rural residential. The future U.S.-Mexico Port of Entry is to be located west of the terminus of the pipeline route (Figure 4).

Eleven rural residences border the proposed alignment. All would be over 50 feet from the location of the proposed pipeline (Tanner pers. comm.).

The Port of Entry facilities are currently being constructed. These facilities are scheduled to be opened concurrently with the completion of pipeline construction. Operation and maintenance of the pipeline would coincide with operation of the adjacent Port of Entry.

B. SOCIOECONOMIC CONSIDERATIONS

The environmental setting for socioeconomic considerations remains the same as that described for the southern terminus in the original EA (LSA 1993).

C. VISUAL RESOURCES

The visual character of the pipeline route is dominated by agricultural fields in various phases of cultivation and the U.S. Port of Entry, which is currently under construction. Port of Entry construction activities are expected to continue and to coincide with construction of this pipeline. There are a total of 11 rural residences with views of the pipeline construction corridor: four on Jasper Road and seven on Anderholt Road.

D. TRAFFIC

Regional access to the project area is provided by Interstate 8 (I-8) and State Highways 111, 78, and 98. Barbara Worth Road runs perpendicular to I-8 and State Highway 98. Jasper Road bisects Barbara Worth Road roughly one mile north of State Highway 98. The revised border crossing would require a construction right-of-way of approximately one mile long paralleling Jasper Road, two miles along Anderholt Road, and two miles along Carr Road.

E. VEGETATION AND WILDLIFE

Methods

Existing published and unpublished literature sources were researched. Locally knowledgeable persons and biologists from the Bureau of Land Management (BLM), USFWS, and CDFG were consulted. A search was made of the California Natural Diversity Data Base (CNDDB 1993) for records of occurrences in the general vicinity of the project area. Lists of potentially occurring special status species supplied by the USFWS for two other proposed projects in the general vicinity were reviewed (ESA 1993, LSA 1993). Based upon this input, a list of potentially occurring special status species was compiled. Appendix B includes information on scientific names, habitat, and season of occurrence (animals) or bloom (plants) potentially occurring in the project vicinity.

Reconnaissance level biological surveys were conducted throughout 1994. Appendix C provides the results of these surveys.

Results

No natural habitat types were present along the revised border crossing portion of the project route. Human-created/influenced habitat types included agricultural land, irrigation facilities, and urban. Vegetation, other than agricultural crops, along the proposed working strip consisted mainly of ruderal (weedy), herbaceous species. No wetlands were detected along the working strip. Potential wetlands may be present off the project site.

None of the federal and/or state listed threatened and endangered species identified as potentially present in the general project vicinity (i.e., within 25 miles; see Appendix B) were detected on the field surveys, nor were any likely present given the lack of suitable habitat.

One California species of special concern was detected along the proposed route. Eight burrowing owls (*Speotyto cunicularia*) were along the Jasper and Anderholt roads. Within three miles of the proposed revised border crossing area, but not within the proposed working strip area, another species of special concern, the loggerhead shrike (*Lanius ludovicianus*) was observed. Species of special concern are not included under the protection of either the state or federal Endangered Species Acts. All other plant and animal species were not detected and are presumed absent due to lack of suitable habitat.

A more thorough search of the project area could detect additional locations of burrowing owls in the proposed working strip. Burrows, potentially usable by burrowing owls, were abundant along agricultural irrigation berms and levees. The burrowing owl is a potential nesting species on or adjacent to the pipeline corridor.

The shrike also is a federal candidate threatened or endangered species, category 2. Use of habitat on the project site by the shrike would be incidental. Suitable nesting habitat for the shrike, which uses trees or shrubs for nesting, was absent along or adjacent to the pipeline corridor.

F. GEOLOGY, SOILS, AND SEISMICITY

The elevation at the proposed pipeline alignment ranges from 15 to 30 feet above mean sea level (msl); the route is generally level. Geologic units through which the proposed right-of-way would traverse are recent (10,000 years old or less) alluvium, lake, clay and/or terrace deposits.

Soils

The soil complexes found in the project area are those dominant in the lacustrine basin formerly occupied by the old Lake Cahuilla. The soils are nearly level and deep. They exhibit slow permeability and surface runoff. The potential for erosion is slight. The potential hazards from seasonal expansion and contraction of soils is high. Soils are highly corrosive to uncoated steel and moderately corrosive to concrete.

A perched water table is typically present between 36 and 60 inches below the surface in most basin soils because of seepage from canals and extensive irrigation. It can be as high as 18 inches below the surface during periods of heavy rainfall (SCS 1981). The capability of the soils under non-irrigated conditions is VIIIw, indicating that without artificial drainage, these soils have severe limitations, making them unsuitable for commercial crop production. Along the majority of the pipeline route, soils are poorly suited to intensive farming due to slow permeability, low water-holding capacity, a too-fine textured surface layer, or a problem or limitation caused by soil salinity (SCS 1981). Soils in the project area are suitable for agricultural use when properly irrigated and drained.

Subsidence

Subsidence is the gradual, local settling, or sinking of the earth's surface. It is usually the result of gas, oil, or water extraction, hydrocompaction, or peat oxidation. The Imperial Valley experiences a continuous natural subsidence toward the Salton Sea (Imperial County Planning 1990).

Seismicity

The closest fault to the proposed pipeline alignment is the Imperial Fault which is located approximately one mile northeast of the turn of the pipeline route from Jasper Road south along Anderholt Road. At the border crossing,

the Imperial Fault is approximately one and one-half miles to the northeast (Figure 5). The Imperial Fault has been active within the last 200 years.

The latest event on the Imperial Fault was a 6.6M event in 1979 (Wells pers. comm.). The epicenter of this earthquake was approximately 12 miles south of the Mexican border and about 12 miles east of Mexicali. Two aftershocks of 5.0M or greater occurred five hours after the main quake. Gas Company line 6001 suffered compressive stress during this earthquake and a fitting buckled, generating a leak. It was repaired without having to be shut down. An east-west gas lateral off this line was stretched where it traversed the fault. The line did not rupture and repair did not require shutting down the gas transport system (Imperial County Planning 1990). The maximum credible earthquake along the Imperial Fault is a 7.0M event. The maximum probable earthquake would be between a 6.8M and 7.0M event (Wells pers. comm.).

Liquefaction is the sudden loss of strength within saturated granular soils during seismic groundshaking. Liquefaction can result in significant differential settlement and/or lateral spreading. In the Imperial Valley, differential settlement has typically been associated with magnitude 6 to 7 earthquakes. During the 1979 earthquake, substantial ground spreading and liquefaction was noticed in the vicinity of the fault and along old river beds. Ground lurching within levees during earthquakes causes slumping and potential rupture. In 1979, both the All American Canal and the South Alamo Canal (east of the PoE) levees experienced slumping (ESA 1993).

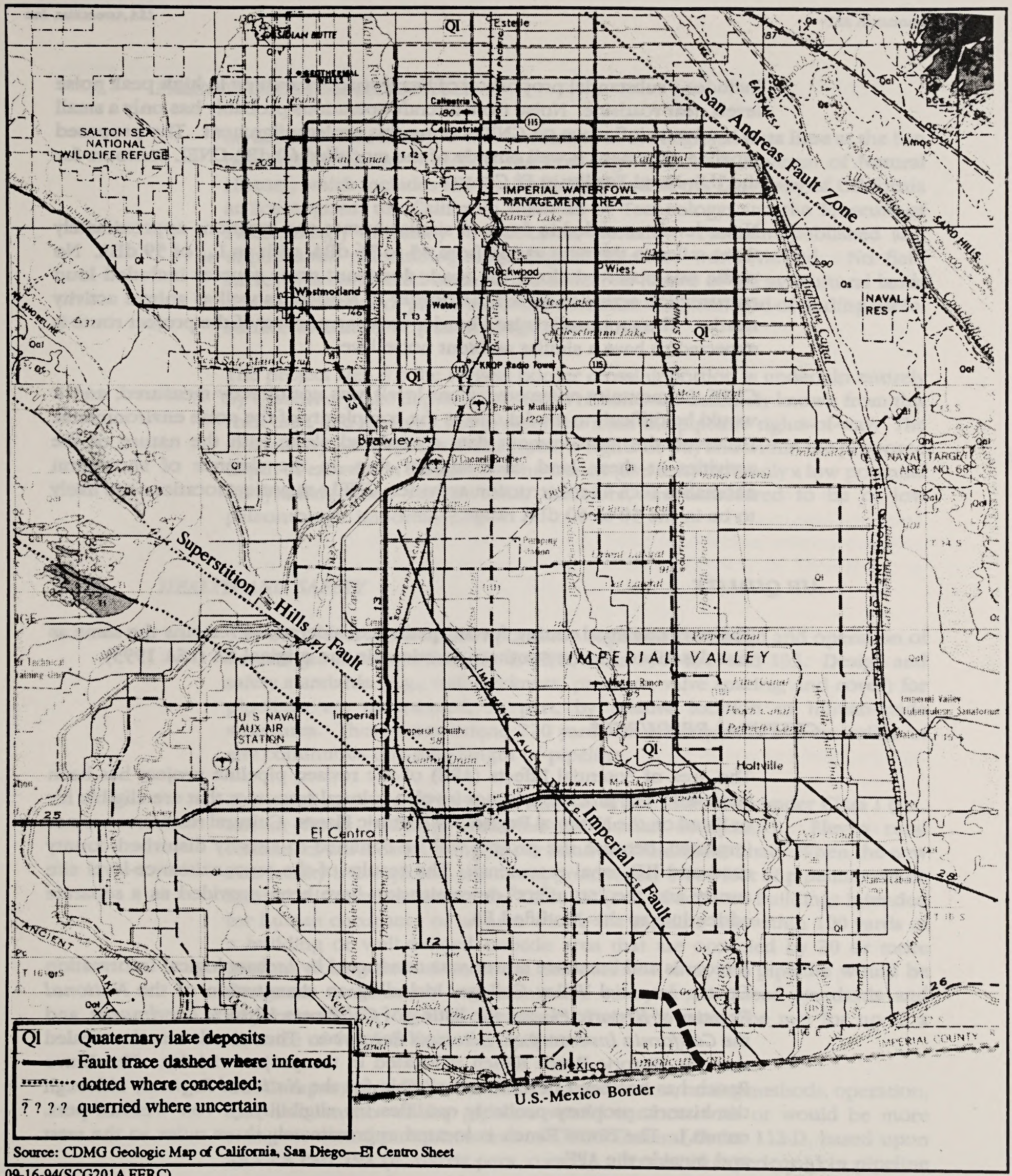
G. HYDROLOGY

No Federal Emergency Management Agency (FEMA) mapped floodplains are traversed along the pipeline route (Imperial County Planning 1990). While floods in central Imperial County are rare, they can be caused by heavy rains that overwhelm generally dormant creeks and washes. Damage to the levee along the All American Canal during earthquake shaking could result in water spilling over to adjacent fields. The Colorado River, which is generally well controlled, has in the past caused flooding along the river areas due to large releases of water. (For further detail on the hydrology setting, see the original EA [LSA 1993]).

H. NOISE

Noise sources include traffic on Barbara Worth, Jasper, Anderholt, and Carr roads and aircraft operations associated with the U.S. Naval Air Facility at El Centro (which is an intermittent noise source). Noise-sensitive and potentially vulnerable noise receptors to project noise impacts include 11 residences located along Jasper Road and Anderholt Road.

The alignment passes east of Calexico and is outside city limits. Barbara Worth Road carries only sparse traffic; however, what little traffic there is


SALTON SEA NATIONAL WILDLIFE REFUGE
IMPERIAL WATERFOWL MANAGEMENT AREA
San Andreas Fault Zone
EASTMESA
SAND HILLS
NAVAL RES
NAVAL TARGET AREA NO. 03
Estelle
Calipatria
Westmorland
Rockwood
Wiest
KROP Radio Tower
Brawley
Imperial
U S NAVAL AUX AIR STATION
El Centro
Holtville
IMPERIAL VALLEY
Superstition Hills Fault
Imperial Fault
ANCIENT LAKE
HIGH WATERLINE OF ANCIENT LAKE CAHUILLA
Amos
Ql
Qal
Qs
Qoa
Qc
Qoa
Qoa
Qoa

includes a substantial proportion of heavy trucks, resulting in high peak noise levels near roadside. Noise from aircraft operations probably has only a small to moderate influence on CNELs along this project alignment. The proposed pipeline alignment is well outside of the modelled 60 dBA CNEL contours for the U.S. Naval Facility at El Centro.

Noise levels recorded in front of similar homes and locations approximately three miles to the west varied from 45 to 76 dBA, with an L_{50} of 59 dBA. No traffic was observed along the road; dominant noise sources included loud construction activities across the border in Mexico, as well as animal activity nearby. The proposed revised border crossing portion of the project route is expected to have a similar ambient noise level.

CNEL (community noise equivalent level) was not directly measured, and it would be difficult to model due to the complexity of the noise environments. However, the measurement data considered along with the nature of the activities at these land uses suggest that, in the absence of short-term anomalies such as construction activities, CNELs at project locations are likely to be in the 50 to 60 dBA range.

I. AIR QUALITY

The environmental setting for air quality considerations remains the same as that described for the southern terminus in the original EA (LSA 1993).

J. CULTURAL RESOURCES

The Area of Potential Effects (APE) of the revised pipeline project has been surveyed. The pipeline will not involve cultural resources that are eligible for or listed on the National Register of Historic Places. Cultural resources are not impacted, because the project will be confined to already disturbed county road and IID canal easements. The results of the reconnaissance-level site survey and the "no affect" determination have been provided as a separate addendum to this Modified EA.

A records and literature search was conducted by Archaeological Information Center, Imperial Valley College, including an examination of the *National Register of Historic Places,* the listing of *California Historic Landmarks,* and the *California Inventory of Historical Resources.* The records search revealed that the Historic Bravo Ranch is located in the project vicinity. The Bravo Ranch has not been determined eligible for the *National Register,* although the historic property probably qualifies for eligibility (J. von Werlhof pers. comm.). The Bravo Ranch is located approximately three miles to the west and outside the APE.

The APE survey results will be supplied and all required consultations will be complete prior to project implementation.

K. PALEONTOLOGICAL RESOURCES

An archival records review was conducted at the Regional Data Base at the San Bernardino County Museum; the Los Angeles County Museum of Natural History, which includes the fossil recovery data of the University of California at Los Angeles; the California Institute of Technology; and the Museum of Paleontology, University of California, Berkeley. Pertinent published and unpublished paleontological/geological literature was reviewed. No field survey was conducted because the disturbed nature of the agricultural lands and the presence of paved roadways minimize the likelihood of finding useful surface indicators of paleontological resources.

The project area for the revised border crossing portion is underlain entirely by Quaternary lake deposits. No fossil remains are definitely known from this rock unit, and no fossil site is recorded from the pipeline rights-of-way. The Quaternary lake deposits in the pipeline rights-of-way and within the proposed depth of excavation for the pipeline trench (five feet) have only a low potential for yielding fossil remains and, therefore, are considered to be of low paleontologic importance.

L. HEALTH AND SAFETY

The U.S. Department of Transportation regulates the design and operation of natural gas pipelines through 49 CFR, Parts 190, 191, and 192. Design and safety standards (e.g., wall thickness, pressure, valve spacing, and cover) for pipelines are determined, in part, by relative location to human-made structures. These areas extend 220 yards on either side of the centerline of any continuous one-mile length of pipeline.

The pipeline would be located within an area of land uses under Class I (i.e., ten or fewer buildings intended for human occupancy). Eleven rural residences are located along Jasper Road and Anderholt Road. When the new PoE facility is completed, the last approximately 3,000 feet of pipeline will be located within a land use under Class III (i.e., 46 or more buildings intended for human occupancy or an area where the pipeline lies within 100 yards of a building or well-defined outside area that are occupied by 20 or more persons during normal use). In this sensitive area, the pipeline would be designed, constructed, and monitored to meet or exceed standards and requirements for Class III locations. Standards would be met for up to a distance of 660 feet from the facilities.

Gas Company procedures for design, construction, testing methods, operation, and maintenance of the pipeline would conform with or would be more stringent than the requirements of CPUC General Order 112-D, based upon 49 CFR Part 192 (E. Harris pers. comm.). Personnel experienced in pipeline construction work would be employed. Federal Occupational Safety and Health Administration (OSHA) and Cal OSHA requirements would be followed

to protect worker safety. Surveillance would be performed at intervals which either meet or exceed the frequencies mandated in G.O. 112-D.

IV. POTENTIAL IMPACTS AND MITIGATION MEASURES

The pipeline alignment would be entirely within existing disturbed areas, such as county roads and canal rights-of-way. The valve/meter station is planned to be constructed in an already disturbed canal right-of-way due north of the All American Canal and east of the U.S. Port of Entry.

The No-Action Alternative is the same as the already approved terminal 2.7 miles of the line 6902 project. Although there are minor quantitative differences between the already approved and the revised project (Table 1), the impacts associated with both are not significantly different.

A. LAND USE

Potential Impacts

Land use impacts can be defined as effects that would result if the project adversely affected existing land uses, or conflicted with adopted land use plans and policies. Because the pipeline would be located within existing roadway and canal easements, no permanent or significant impacts on open space or agricultural land uses along the alignment are anticipated.

Construction could result in temporary agricultural impacts. The temporary working strip could encroach as much as 20 feet into adjacent agricultural land over part of the alignment. Construction may prevent agricultural activities within this encroachment area for up to two months. The loss of maximum total of about 7.6 acres of agricultural land for one to two months would be a negligible impact when compared to the total agricultural acreage within the project vicinity.

During the construction period, the 11 rural residences may experience traffic, visual, and noise impacts. According to the General Plan for Imperial County, future land uses along the proposed route include urban development and agriculture. The proposed revised border crossing portion of the project would conform with these uses.

The pipeline would be under construction during the same period as construction of the U.S. Port of Entry. Operation of the pipeline would coincide with operation of the adjacent Port of Entry.

No-Action Alternative

Under the No-Action Alternative, one restaurant and four residences would be affected, rather than 11 residences. Under the No-Action Alternative, a maximum of 8.7 acres rather than 7.6 acres of agricultural land could be temporarily taken out of production. The No-Action Alternative would not

affect the Port of Entry. The differences between the two alternatives are not significant.

Mitigation Measures

1. To minimize potential land use conflicts resulting from short-term visual, traffic, and noise impacts associated with pipeline construction adjacent to the 11 residences, the Gas Company shall undertake measures identified in those respective sections of this document.

B. SOCIOECONOMIC CONSIDERATIONS

Potential Impacts

The proposed pipeline would result in both positive and negative socioeconomic impacts. Construction workers would require housing, receive an income, and generate taxable revenues. Beyond property taxes paid by the operator, no local socioeconomic effects would be associated with subsequent operation of the pipeline. The only potentially significant adverse impact would be a minor temporary decrease in the availability of temporary housing in the Imperial Valley. An impact may be considered significant if it results in a 10% or more variation in the existing condition of the socioeconomic indicator (LSA 1989). The revised border crossing portion of the project would not result in such a variation.

No-Action Alternative

This alternative would have slightly greater, but not significantly greater, positive and negative socioeconomic impacts during construction, because the labor force would be doubled. The wider working strip associated with the No-Action Alternative would result in a potential for approximately 15% more agricultural land temporarily affected.

Mitigation Measures

Where the construction right-of-way constrains agricultural activities, the Gas Company shall reimburse landowners for the temporary loss of agricultural revenues.

C. *VISUAL RESOURCES*

Potential Impacts

During construction, an increase in debris and surplus materials, such as welding rod, pipe sections, discarded equipment, paper, plastic, and metal fragments, could occur along the right-of way. This debris would be cleaned up immediately behind the equipment as construction progresses. These materials could be aesthetically unpleasant during the construction period, but would have no long-term impact after debris is removed. The Gas Company would monitor the clean-up of the project site and conduct follow-up inspections. Therefore, an increase in debris and surplus materials is not likely to result in a significant visual impact. Except for a few localized areas described below, construction would not result in significant short-term visual impacts along the alignment.

The pipeline would be trenched. The proposed 50-foot by 100-foot meter station is planned to be located in a IID canal easement due north of the All American Canal embankment and east of the Port of Entry. No residences or businesses would be visually impacted.

A basic construction zone of 50 feet in width would be required along the route. Construction would not result in significant short-term visual impacts along the alignment. This is due to the low population in areas through which the pipeline traverses, and the fact that the revised border crossing portion of the project would run through agricultural lands adjacent to an existing right-of-way. No significant long-term visual impacts would be expected.

No-Action Alternative

Under this alternative, the existing visual quality of the right-of-way would experience similar impacts to that of the proposed. The temporarily disturbed area under the No-Action Alternative would be 50% wider. But overall area temporarily affected would be 24% less, because the No-Action Alternative is shorter than the proposed. One restaurant and four residences would directly experience visual impacts during of the No-Action Alternative, compared to no restaurant and eleven residences for the proposed.

Mitigation Measures

The following mitigation measures would partially offset potential adverse visual impacts.

1. All valves and other exposed materials shall be painted in an earth-tone color, such as light brown (Munsell soil color chart matrix color 10 YR,

6/6 or 10 YR, 7/6), so that they would better blend with the surrounding area.

2. The area cleared of vegetation for the construction zone shall be as narrow as possible (less than 50 feet) so that visual quality and erosion impacts are minimized.

D. TRAFFIC

Potential Impacts

No long-term traffic-related impacts would be generated after construction of the proposed underground pipeline. Short-term construction-related impacts could be created along Jasper, Anderholt, and Carr roads and along the South Alamo Canal levee road. This level of temporary disturbance would not be significant.

No-Action Alternative

Under the No-Action Alternative, short-term construction-related impacts could be created along 2.7 miles of Barbara Worth Road comparable to those associated with the proposed alternative.

Mitigation Measures

The following measures are identified to offset potential temporary adverse circulation impacts.

1. The Gas Company shall provide adequate signage and/or flag personnel at Barbara Worth, Jasper, Anderholt, and Carr roads and along the levee road for the South Alamo Canal. The Gas Company shall redirect commuters to the satisfaction of the Imperial County Public Works Department. These plans shall be submitted to the Imperial County Public Works Department for review prior to construction. These roads shall not be completely blocked during the construction process, except for short periods, and never overnight.

2. At the end of each work day, the Gas Company shall provide that all trenches in or adjacent to roadways be completely protected, covered, or filled in, in coordination with the Imperial County Public Works Department. This procedure is meant to prevent traffic hazards and ensure flow of traffic.

3. The Gas Company shall return all paved and unpaved roads to their original condition, to the satisfaction of the Imperial County Public Works Department, after each section of the pipeline is constructed.

4. Existing public and private roads shall be used as much as possible for access to the pipeline right-of-way.

E. VEGETATION AND WILDLIFE

Determination of No Effect

The project site supports ruderal, agricultural, and developed land uses. No natural habitat is present, and no threatened or endangered species were found on-site or expected to be found on-site. The determination of this Environmental Assessment is that no threatened or endangered species will be affected by the revised border crossing location.

Potential Impacts

Existing human impacts on biotic resources are heavy throughout the project area. No native habitat is extant, nor are wetlands present. All impacts would be experienced during construction and would be temporary; no permanent impacts were identified.

Impacts of undetermined magnitude are potentially possible, although unlikely, during construction activities. These include harassment of wildlife by pets, collection or destruction of native plants and wildlife, vehicle activity and placement of storage areas in sensitive habitat off the working strip, entrapment of wildlife in pipes, attraction of wildlife by improper deposition of trash, introduction of hazardous materials, accidental fires, and discharge of hydrostatic test water in sensitive habitat.

Native vegetation has been mostly eliminated from agricultural and developed areas. These habitats have marginal value as cover for some species of birds, especially migrants and wintering species. Project impacts on wildlife habitat would be insignificant.

No state or federally listed threatened or endangered animals or plants would be affected by this revised border crossing location. Eight burrowing owls were observed along the canal levees. Loggerhead shrikes were sighted within three miles of the proposed right-of-way. Both species are California species of special concern, and the loggerhead shrike is also a federal candidate threatened or endangered species, category 2. These special status species are not included under the protection of either the state or federal Endangered Species Acts. Nesting habitat for the shrike is not present; use of habitat on the project site by the shrike would be incidental.

Impacts on burrowing owl would be significant, if not mitigated. Burrowing owls could be trapped inside their burrows and killed due to construction activities. The owls would be particularly vulnerable during the nesting season from approximately February to July. In that time, adult owls are more likely

to hide within their burrows, than flush (fly away), when disturbed. Eggs and juvenile owls in nest burrows would also be at risk during that season.

No-Action Alternative

Similar habitat and species would be affected by the No-Action Alternative. Although assessment surveys detected only three burrowing owls along the No-Action Alternative alignment, compared to eight along the proposed alignment, this difference is not significant.

Mitigation Measures

These mitigation measures are designed to reduce the impacts to the level of insignificance.

1. ***Worker Education Program***. This program shall consist of printed materials and a briefing session conducted by a biologist to familiarize construction personnel with biological resources along the route, particularly special status species such as the burrowing owl.

2. ***Pets***. To prevent harassment, mortality, or destruction of dens and burrows of wildlife, pets shall not be allowed on the working strip, staging areas, access roads, and other sites required for construction activities.

3. ***General Plant and Animal Protection***. No intentional killing or collection of either plants or wildlife shall be permitted.

4. ***Designated Construction Zone***. Project-related vehicle traffic, construction activity, and equipment storage shall be restricted to established roads, designated access roads, the working strip, storage areas, staging and parking areas, and other designated project areas. This includes the placement of portable toilet facilities.

5. ***Storage Areas***. To minimize permanent and temporary construction disturbances, storage facilities shall be located at sites that have previously been disturbed. Storage areas shall be examined during preconstruction surveys for all state-listed and federally listed species and other special status species.

6. ***Pipe***. The open ends of all in-place pipeline segments shall be capped, until backfilled, to prevent animals from entering. The inside of all pipe shall be inspected before being moved.

7. ***Sanitation.*** Food items may attract sensitive species and potential predators to the construction site at night, consequently exposing them to construction-related or other hazards. Construction sites shall be

maintained in a clean condition. This duty shall be the responsibility of the Gas Company and its contractors. All trash (e.g., food scraps, containers, wrappers, cigarette butts, and equipment) shall be properly disposed of offsite. All food-related trash and litter (e.g., wrappers, cans, bottles, food scraps, and cigarette butts) shall be placed in closed containers and disposed of daily. The working strip shall be inspected daily to remove trash or litter that may not have been disposed of properly.

8. ***Hazardous Materials.*** Hazardous materials that are most likely to be used in construction areas include explosives, fuels (gasoline and diesel), lubricants, and solvents. If hazardous material is discharged from the system or from containers or vehicles during any phase of construction, operation, or termination of the pipeline, the control, removal, disposal, and cleanup shall be the responsibility of the Gas Company. Refueling of these materials shall not be allowed within 200 yards of a perennial stream or canal. The storage of these materials near streams shall be consistent with California Fish and Game Code Section 5650 and all other federal and local regulations.

9. ***Fire Management***. Construction equipment shall be equipped with shovels and fire extinguishers. Workers shall be trained in their use. Fire resistant mats and/or wind screens shall be placed on the ground below welding and grinding operations whenever dry vegetation is present. Supervisors shall have the names of local fire fighting agencies and ready access to telephones to make contact. In the event of an accidental fire that cannot be quickly contained with fire suppressants on hand, fire fighting agencies shall be contacted and their directions followed.

10. ***Preconstruction Surveys***. The working strip shall be surveyed by a qualified biologist prior to clearing. One survey shall be conducted within 30 days of clearing to determine presence or absence of special status species.

11. ***Burrowing Owl***. One or more biological monitors shall be present during initial grading and clearing in habitat that can potentially support burrowing owls. Construction activity shall avoid burying active burrowing owl nests. Soil stockpiles and vegetation stockpiles shall not be placed on any active burrows.

    Nonbreeding Season Protocols. In the nonbreeding season, active burrows shall be identified in the preconstruction survey. These burrows shall be fitted with one-way doors approximately 72 hours before ground-clearing activities. The one-way doors would allow owls to escape from the burrows but not to return. Burrows determined to be within the working strip and to be empty by the biologist shall be filled in with dirt. The biologist may determine occupancy of burrows by either detailed observations, careful digging, or use of a fiber optic

scope. Burrows in or within ten feet of the area to be cleared shall be fitted with one-way doors. After pipeline construction is completed, the one-way doors shall be removed.

Breeding Season Protocols. In the breeding season (approximately February through July), active burrows shall be identified in the preconstruction survey. A fiber optic scope shall be used to determine the contents of the burrows. Those burrows with young or eggs inside shall be avoided. Those burrows being used by burrowing owls, but without eggs or young, shall be fitted with one-way doors as described above. Those determined to be within the working strip, but inactive, shall be filled with dirt. The biologist shall properly notify CDFG and USFWS of these activities and obtain permits, if necessary.

12. ***Hydrostatic Test Water Discharge***. Water shall be discharged into an existing wash or canal. As part of the preconstruction survey, the biologists shall survey the identified areas where water would be discharged after hydrostatic testing. Occurrences of sensitive species shall be documented and appropriate measures (see above) taken to avoid impacts.

13. ***Cleanup***. After construction is completed, a final construction corridor cleanup shall include removal of all stakes, flagging, barrels, cans, drums, accidental spills, and other refuse generated by construction. No shrub material or other plant cover shall be disturbed during this process.

14. ***Final Inspection***. A biologist also shall make a final inspection of the completed construction project to assess compliance by the Gas Company. Within 90 days after completion of construction and post-construction cleanup, a postconstruction compliance report shall be prepared to describe and document all monitoring efforts, mitigation compliance, and deviations from the mitigation plan; outline follow-up surveys; and provide recommendations for future projects of this type.

F. GEOLOGY, SOILS, AND SEISMICITY

Potential Impacts

Soils

Erosion. Construction excavation would result in temporary piling of soil alongside the trench. This material would be subject to wind and rain erosion until recompacted to 90% or greater compaction. Because of the short duration of the storage of this material in piles (generally around one week) and the level terrain, this condition would not constitute a significant impact.

Corrosion. Corrosive soils could damage the pipeline by corroding the pipe. Corrosion would be mitigated through use of pipeline coatings and cathodic protection.

Seismicity

Seismic impacts depend on many variables: earthquake magnitude, distance to epicenter, depth of focus, duration of shaking, intensity of shaking, near-surface soil and geologic conditions, and structural type and design. Earthquake-associated damage could be caused by moderate to strong ground motion (shaking), ground failure, and fault displacement.

Strong Ground Motion. The proposed pipeline consists of a welded steel pipe buried below ground surface. Such a buried pipe performs well when subjected to ground shaking. The pipe may be damaged only if the ground around the pipe fails or ruptures.

Ground Failure. Ground failure due to seismic shaking can take place in several forms: settlement, liquefaction, and landsliding. Settlement can occur when loose granular soils are subjected to shaking by the earthquake. Liquefaction can occur when these soils are saturated with water. County maps indicate that loose granular soils subject to liquefaction may be present in ephemeral streambeds. However, no streambeds are traversed by the pipeline route. The potential for seismically induced landslides is non-existent due to level topography.

Fault Displacement. As noted in the Geology Setting subsection, the proposed pipeline route would be approximately one mile southeast of the main traces of the Imperial Fault. Because the pipeline alignment would not cross the fault, it would not be subject to ground rupture. However, similar to other pipelines in the vicinity, it could suffer some compressional stress.

No-Action Alternative

This alternative would result in similar erosion potential and exposure of the pipeline to corrosion. Seismic hazards would be similar, although the No-Action Alternative would be 2.9 miles further west from the Imperial Fault.

Mitigation Measures

The following features have been incorporated into the pipeline design to minimize the effects of various potential hazards in the environment.

1. ***Seismic Shaking.***

a. The pipeline shall be designed so that it would eliminate or reduce adverse effects from moderate to severe seismic shaking.

b. Pipeline maintenance crews shall inspect for potential ruptures and report any fires to the appropriate fire protection agency.

c. Crews shall be trained to respond appropriately to fires, and at a minimum shall carry shovels and fire extinguishers in their vehicles.

2. ***Erosion.***

a. Erosion control procedures shall be used to minimize potential problems. An erosion control plan shall be developed as necessary as part of the required Stormwater Pollution Prevention Plan (SWPPP) in compliance with the Clean Water Act regulations for stormwater runoff pollutant control. That SWPPP shall be prepared prior to the start of construction activities.

b. The area cleared of vegetation for the construction zone shall be as narrow as possible (less than 50 feet) so that visual quality and erosion impacts are minimized.

c. The rate of discharge of the test water shall be controlled by use of an energy dissipator/flow disperser to minimize erosion of local terrain in accordance with RWQCB requirements.

d. Fugitive dust control measures identified in the Air Quality section, p. 41, would be required to reduce wind erosion.

e. All disturbed soil areas shall be recompacted upon completion of construction.

3. ***Corrosive Soils.*** The pipeline shall be coated and underground portions shall be cathodically protected to minimize the effects of highly corrosive soils.

G. HYDROLOGY

Potential Impacts

Trenching activities would not alter any natural drainages. The pipeline would, however, run under three small IID irrigation facilities; the Ash 3 Drain, Lateral 3, and the South Central Drain 6. Trenching could subject affected areas to minor levels of increased erosion. After construction, the alignment would be restored to its original contours. The pipeline would

span over the Ash Main Canal and South Alamo Canal. The pipeline would be bored under the All American Canal, avoiding the canal's embankment on either side. Irrigation, irrigation runoff, and stormwater runoff is controlled by the IID's series of canals, laterals, and drains, which ultimately empty into the Alamo River and the Salton Sea. Local siltation and erosion effects may occur near the construction area. These effects on surface hydrology are expected to be minimal.

Approximately 215,000 gallons of water would be required for hydrostatic testing of the pipeline. This water would most likely be obtained from the All American Canal. The test water would either be discharged by spreading in accordance with RWQCB regulations, or returned to irrigation canals for use. For spreading, the rate of discharge of the test water would be controlled to prevent erosion of local terrain. Without mitigation, test waters discharged into unlined drainages could result in high erosion hazards. In addition, this test water may contain trace amounts of rust and particles that are by-products of factory steel pipe construction.

No-Action Alternative

Erosion hazard and the need for erosion control measures would be similar under this alternative. Natural flood drainages and IID irrigation and drainage facilities would be similarly affected.

Mitigation Measures

The following measures are identified to offset potential adverse effects during construction and testing of the proposed pipeline.

1. The rate of discharge of the test water shall be controlled by use of an energy dissipator/flow disperser to minimize erosion of local terrain in accordance with RWQCB requirements.

2. To control erosion of unlined canal sides from possible discharge of hydrostatic test water, the rate of discharge of the water into the canal shall be controlled and other erosion control measures shall be employed.

H. NOISE

Potential Impacts

For the purposes of this analysis, an increase of three DBA or more in CNEL constitutes a significant noise impact whether or not it causes or contributes to an exceedence of any of the standards discussed above. An increase in one dBA or more in CNEL will constitute a significant noise impact if it causes or

contributes to an exceedence of any of the standards discussed above. These increments are based upon studies of the minimum noise increase distinguishable by the human ear.

Potential sources of project noise impacts include construction activities and project operation and maintenance activities. Operation of the revised border crossing location portion of the project would produce only negligible noise impacts; the pipeline and valve stations would generate minimal noise, and vehicle trips associated with pipeline maintenance would be inconsequential. The only maintenance activity that could produce potentially significant noise impacts would be the venting of natural gas. Therefore, this analysis focuses on construction impacts and blowdown events.

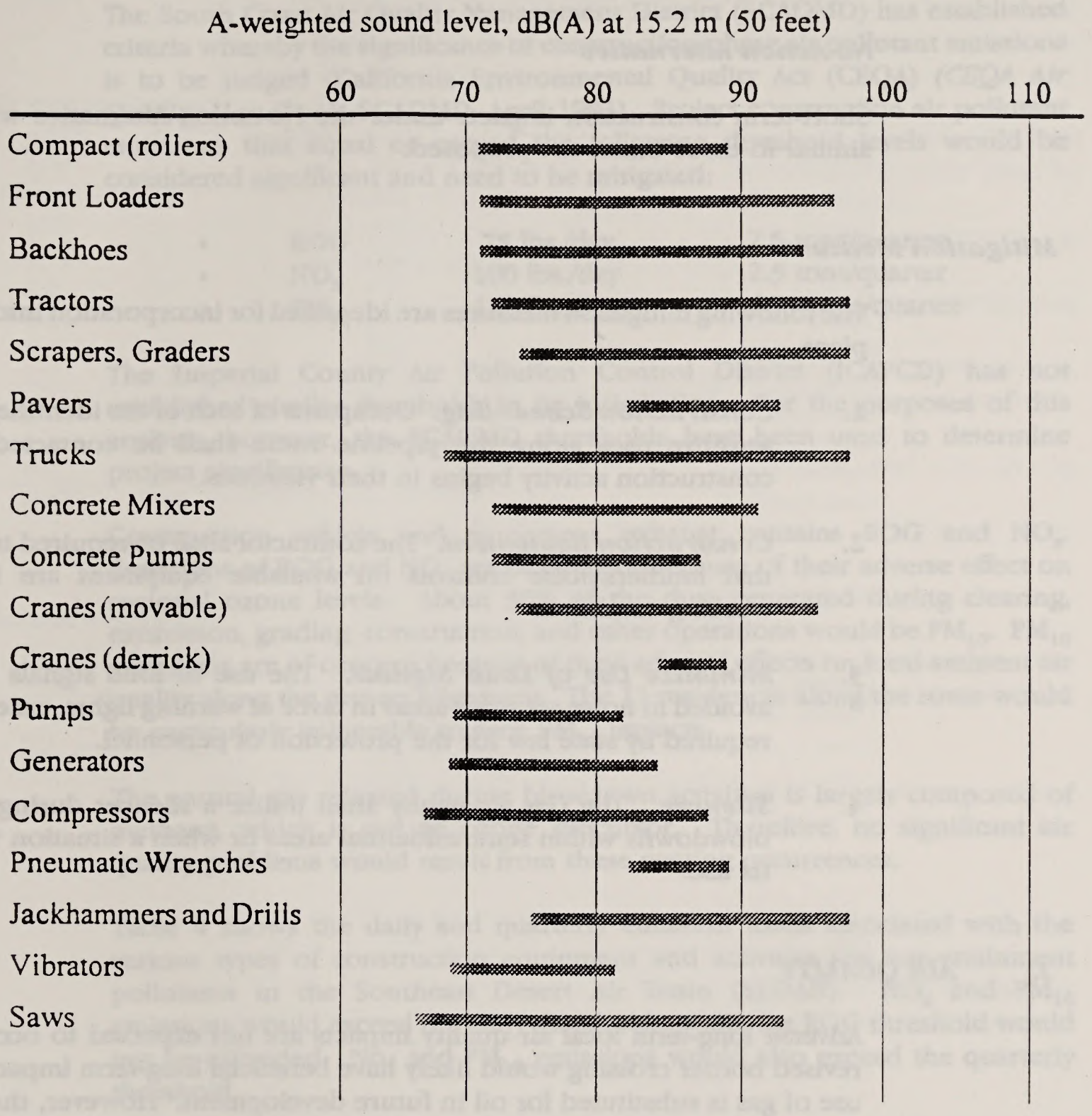
Construction Noise

In a worst-case scenario of project construction noise impacts, noise from construction activities would overwhelm background ambient sources at all worst-case receptor locations. Noise emission data for relevant types of construction equipment have been obtained from a manufacturer (Caterpillar Inc.), and from Environmental Protection Agency (EPA) data (Figure 6). The homes along Jasper Road and Anderholt Road could be exposed to maximum noise levels in the mid-70s dBA and a CNEL in the low 70s dBA. In addition to exceeding CNEL standards, these noise levels are likely to cause disturbance at these structures, which would be occupied during closest approach of construction.

It should be noted that project plans do not call for pavement breaking in the vicinity of these receptors. However, if pavement breaking is required, it could raise peak noise levels at nearby locations several decibels and could influence CNEL slightly.
Because noise levels at each of these locations would likely exceed Imperial County CNEL standards for at least one day and as many as a few days, project impacts at these locations would be considered significant but short term.

Blowdown Noise

During the annual blowdowns at the valve station west of the international PoE, noise receptors would be adversely affected. Sensitive receptors in the vicinity include the future Port of Entry facilities and several rural residences in the local vicinity. Noise levels at the valve station vent stack during a blowdown are estimated to range between 110 and 125 dBA. Actual noise levels would depend on the amount of pressure in the line, the release rate, and the diameter of the venting stack. The proposed valve station would have a portable silencer used to muffle the venting noise in semiresidential areas and when the situation warrants its use. Use of the portable silencer is estimated to lower the venting noise to between 95 and 100 dBA. For comparison, using the silencer can lower the nuisance level of the venting



Source: *Handbook of Noise Control*, by Cyril M. Harris, editor, 1979.

09-16--94(SCG201A FERC)

Figure 6

N

LSA

Noise Levels Typical of Construction Equipment
SoCalGas Border Crossing Facilities

noise to enable conversation on the opposite side of the road (50 to 65 feet away) while venting is occurring (Tanner pers. comm.).

No-Action Alternative

Short-term construction impacts under the No-Action Alternative would be similar to those under the proposed.

Mitigation Measures

The following mitigation measures are identified for incorporation into project plans.

1. ***Construction Scheduling.*** Occupants of each of the identified noise-sensitive uses along the pipeline route shall be contacted before construction activity begins in their vicinities.

2. ***Construction Equipment.*** The contractor shall be required to ensure that mufflers/noise controls on available equipment are in good working condition.

3. ***Minimize Use of Loud Signals.*** The use of loud signals shall be avoided in noise-sensitive areas in favor of warning lights, except those required by state law for the protection of personnel.

4. ***Silencer.*** The Gas Company shall utilize a silencer during routine blowdowns within semiresidential areas or when a situation warrants its use.

I. AIR QUALITY

Adverse long-term local air quality impacts are not expected to occur. The revised border crossing would likely have beneficial long-term impacts as the use of gas is substituted for oil in future development. However, the revised border crossing location portion of the project could have significant short-term impacts during the construction phases, similar to the effects of the original project.

Potential Impacts

The South Coast Air Quality Management District (SCAQMD) has established criteria whereby the significance of construction-phase air pollutant emissions is to be judged (California Environmental Quality Act (CEQA) *(CEQA Air Quality Handbook*, SCAQMD, April 1993). Project construction air pollutant emissions that equal or exceed the following threshold levels would be considered significant and need to be mitigated:

• ROG	75 lbs./day	2.5 tons/quarter
• NO_x	100 lbs./day	2.5 tons/quarter
• PM_{10}	150 lbs./day	6.75 tons/quarter

The Imperial County Air Pollution Control District (ICAPCD) has not established similar thresholds in its jurisdiction. For the purposes of this analysis, however, the SCAQMD thresholds have been used to determine project significance.

Construction vehicle and equipment exhaust contains ROG and NO_x. Emissions of ROG and NO_x are of concern because of their adverse effect on regional ozone levels. About 50% of the dust generated during clearing, excavation, grading, construction, and other operations would be PM_{10}. PM_{10} emissions are of concern because of their adverse effects on local ambient air quality along the project alignment. The 11 residences along the route would be particularly vulnerable to such PM_{10} impacts.

The natural gas released during blowdown activities is largely composed of methane, which is not an ozone precursor. Therefore, no significant air quality problems would result from these venting occurrences.

Table 4 shows the daily and quarterly emission totals associated with the various types of construction equipment and activities for non-attainment pollutants in the Southeast Desert Air Basin (SEDAB). NO_x and PM_{10} emissions would exceed the daily thresholds, while the ROG threshold would not be exceeded. No_x and PM_{10} emissions would also exceed the quarterly threshold.

No-Action Alternative

Construction impacts identified above would be similar for the No-Action Alternative. Project benefits to air quality associated with the use of natural gas instead of oil would not occur, if Pemex would not accept delivery at the terminus of Barbara Worth Road.

Mitigation Measures

The following mitigation measures are identified.

TABLE 4: CONSTRUCTION PHASE AIR POLLUTANT EMISSIONS

Daily Emissions

Equipment/ Activity	# Units	Daily Use	# Crews	Daily Emissions (lbs./day) TOG	NOx	PM10
Ditcher	1	30%	1	1.3	16.3	1.2
Backhoe	2	30%	1	2.6	32.6	2.3
Bender	1	30%	1	1.0	10.2	0.9
Crane	2	30%	1	2.4	27.5	2.3
Grader	1	30%	1	0.3	5.8	0.5
Loader (Wheeled)	2	30%	1	4.1	30.6	2.8
Welding Machine	8	30%	1	10.4	130.2	9.3
Truck (Light On-Road)	11	10 mi	1	0.5	0.3	0.0
Truck (Heavy On-Road)	3	10 mi	1	0.2	0.9	0.1
Employee Commute	25	25 mi	1	1.0	1.4	0.1
Fugitive Dust	9.2	33%	1	0.0	0.0	504.9
Total (lbs/day)				23.8	255.8	524.4

Quarterly Emissions

Activity	# Weeks	Quarter Use	Quarterly Emissions (tons) TOG	NOx	PM10
Pipeline Construction	8	67%	0.5	5.1	10.5
None	4	33%	0.0	0.0	0.0
Total	12	100%	0.5	5.1	10.5

b:\geoff\files\qpro\socal\soceqp6.wq!

1. The Gas Company shall implement effective fugitive dust control measures required by SCAQMD Rule 403[1], which prohibits a visible plume of dust at the boundary of the project. Such measures should include the following:

   - Use water trucks or sprinkler systems to prevent airborne dust from leaving the site. Increased watering frequency shall be required whenever wind speeds exceed 15 mph.
   - Limit the speed for all construction equipment to approximately 25 mph on any unpaved surface.
   - Water or securely cover all excavated material transported offsite.
   - As work progresses to areas where there are paved roads, sweep adjacent streets as needed to remove accumulated silt.

2. Limit ROG and NO_x emissions from equipment and vehicles by implementing the following:
   - Maintain existing gasoline-powered equipment per manufacturer instructions.
   - Substitute electric-powered equipment for internal combustion-powered equipment, where feasible.
   - Substitute gasoline-powered equipment (preferably, with catalytic converters installed) for diesel-powered equipment, where feasible.

3. The Gas Company shall conform with all local ordinances. If the contractor is ordered to shut down by any agency, the Gas Company shall comply.

4. While backfilling the pipeline, the Gas Company shall ensure dust reduction by stabilizing the excavated area. It shall use techniques including, but not limited to, watering or paving to reduce fugitive dust generation onsite in a manner meeting the approval of the county public works director.

J. CULTURAL RESOURCES

Potential Impacts

The proposed revised border crossing location portion of the project will not include previously recorded historic properties. This alternative would not disturb any known prehistoric resources.

---

[1]Although Imperial County is not within the SCAQMD, this EA recommends its application to the proposed project.

No-Action Alternative

This alternative would have affects on cultural resources similar to the proposed alternative.

Mitigation Measures

1. The Gas Company will coordinate through the BLM with the State Historic Preservation Office (SHPO) to fulfill the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended. Prior to implementation of this project, SHPO clearance shall be obtained.

2. If buried artifacts or other indications of subsurface archaeological sites are found, grading shall be halted until the finds can be evaluated and all consultations are complete. If significant resources are present which warrant a data recovery program, such shall be developed, but not implemented, until approved by the SHPO.

3. If avoidance of any as-yet undiscovered significant cultural resource in the Area of Potential Effects (APE) is not possible, a treatment plan shall be required. This plan shall include additional fieldwork testing for any subsurface deposits and further documentation of the surface artifacts observed. The plan would be forwarded by the BLM to the State Historic Preservation Office (SHPO) for approval. Until a treatment plan is approved by the SHPO and implemented, no construction would be permitted that could jeopardize the resource.

K. PALEONTOLOGICAL RESOURCES

Potential Impacts

The route is underlain entirely by Quaternary lake deposits. No fossil remains are definitely known from this rock unit and no fossil site is recorded from the proposed right-of-way. Excavation of the pipeline trench to a depth of five feet probably would not extend to sufficient depth in the Quaternary lake deposits to encounter rocks old enough to contain fossil remains. Adverse impacts resulting from excavation of the pipeline trench would be of low paleontologic significance because of the low potential for disturbance or loss of any scientifically important fossil remains, associated geologic and geographic site data, or unrecorded fossil site.

No-Action Alternative

This alternative would have affects on paleontological resources similar to the proposed alternative.

Mitigation Measures

Excavation of the pipeline trench is unlikely to cause disturbance or loss of scientifically important fossil remains, associated geologic and geographic site data, or unrecorded fossil sites in the Quaternary lake deposits. A mitigation program for reducing impacts on paleontologic resources, as specified in recently issued guidelines for mitigating construction-related adverse impacts on paleontologic resources, would not be required during excavation of the pipeline trench.

1. In the event that significant fossil remains were uncovered by excavation of the pipeline trench, impacts on the remains would be stopped until a paleontologist has been called to the site to evaluate and, if appropriate, remove the remains, and develop additional mitigation measures, if warranted.

L. HEALTH AND SAFETY

Potential Impacts

Construction

Construction operations such as grinding and welding could result in fires near the pipeline. Certain materials that may be used during pipeline construction could present a hazard. Fuels, which would be delivered to the site in tank trucks, are a potential concern. The Gas Company would implement measures that would minimize this potential hazard to a level of insignificance.

Operation

Geologic hazards and mitigations are evaluated in the Geology, Soils, and Seismicity section of this chapter. Implementation of the revised border crossing location portion of the project would result in the transport of natural gas under a typical pressure of 720 psi. The gas could form liquid condensates. To minimize this potential, the gas would be of pipeline quality and any liquid condensate would be removed by drip valves. Potential adverse impacts from pressure and condensate during transport of gas within the pipeline would be nonexistent.

Heavy excavation equipment may crack or punch a hole in a buried pipeline, but would not likely sever it. To minimize the possibility of future construction adversely affecting the line, signage would be included to clearly delineate the alignment. As part of the project, warning signs at intersections with public rights-of-way and other locations would be placed to indicate the high-pressure gas line. With this signage and the isolation of the line, damage from future heavy excavation equipment would be relatively insignificant.

Accidents from leaks or external damage to the pipeline could result in the release of natural gas. If the released gas is ignited, it could burn and/or explode and pose a risk to structures or persons living in or traveling through the area. The significance of this impact would depend on its location along the route.

The potential hazards to pipeline maintenance personnel during blowdown events are expected to be below a level of significance because of the safety procedures that are incorporated into the activity. During blowdowns, all maintenance personnel are equipped with safety gear and ear protection. The valves are opened remotely at a distance of at least 30 feet from the discharge point. The gas is released straight upward from stacks that are 8-10 feet high.

Because much of the pipeline would be placed away from human habitation, hazards would be minimal along most of the alignment. Facilities in the pipeline right-of-way could be damaged as a result of a rupture in the pipeline. Adverse impacts from a pipeline rupture would be greatest in the future inhabited Class III area near the end of the pipeline alignment when the international PoE is completed. Adjacent future developed areas of Mexico could also be affected.

As part of the proposed revised border crossing location portion of the project, the pipeline would be designed, constructed, operated, maintained, and monitored to conform with previously discussed orders and regulations. Consistency with these requirements is expected to minimize to a level of insignificance the danger to persons and structures.

No-Action Alternative

Under this alternative, risks of hazard to health and safety from pipeline construction and possible leaks or ruptures from the pipeline's subsequent operation would be similar to that of the proposed alternative.

Mitigation Measures

No further mitigation measures are recommended. Implementation of the safety mitigation measures in the geology, soils, and seismicity and hydrology sections of this document will mitigate potentially adverse impacts to below a level of significance.

V. CUMULATIVE IMPACTS AND GROWTH INDUCEMENT

A. INTRODUCTION

Definition

NEPA Guidelines (BLM 1992) define a cumulative impact as an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or persons undertake such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Incremental activities and multiple sources combine to create cumulative impacts.

Reasonably Foreseeable Future Actions

Among the reasonably foreseeable future actions for the project vicinity are a number of development project and the recently ratified North American Free Trade Agreement (NAFTA). These actions, which could result in cumulative environmental impacts on the region, are analyzed below.

B. REGIONAL DEVELOPMENT

Development proposed for the region and potentially relevant to project include new electrical transmission lines, irrigation canals, and the new Port of Entry. The Imperial County Public Works Department has indicated that road improvements are not planned in the project vicinity for 1995 (Gray pers. comm).

Southern Arizona Transmission Line Project

The IID has proposed a major power line transmission project to be under construction by 1996. The Southern Arizona Transmission Line project would run from Palo Verde, Arizona, and extend westward through Yuma, into Holtville, California, and follow northwesterly along the East Highline Canal to the electrical plant in Devers. The construction of this powerline is not expected to occur concurrently with the proposed revised pipeline border crossing, which is proposed for construction in the spring of 1995.

A second, smaller transmission line is planned between El Centro and Calexico. Details regarding the schedule for this line have not been formalized, and it is not expected that its construction will take place during construction of the proposed revised border crossing location portion of the pipeline project.

East Lowline Interceptor Project

The IID has plans to complete the modified East Lowline Interceptor project. This project involves the construction of a series of "stepped" interceptor canals between State Highways 111 and 115 between the D and Mulberry laterals and a reservoir near the intersection of Kershaw Road and the Vail Supply Canal (Hull pers. comm.). Construction is expected to begin as early as the spring of 1995 and will take between nine months and a year to complete. Construction of this project would coincide with the proposed revised pipeline border crossing construction. However, the East Lowline Interceptor project would be located approximately 30 miles farther to the north.

Port of Entry

The U.S. General Services Administration, in cooperation with Mexico, is constructing a new international border crossing between the United States and Mexico. The new Calexico East Border Station project includes an access road system to the new Port of Entry on the California side. The facility is being constructed approximately 6.5 miles east of the City of Calexico. A bridge across the All American Canal will have six lanes and will help relieve the commercial and passenger vehicle and pedestrian traffic at the existing border station. A new section of State Route 7 will be built to connect the new facility with State Route 98 and I-8. The Port of Entry is expected to be open by the summer of 1995. Caltrans has programmed the State Route 7 construction to coincide with the opening of the port in July 1995.

The construction of the proposed pipeline in spring 1995 would coincide with the initial construction of the Port of Entry. Prior to pipeline construction, the Gas Company will consult with concerned parties, including the Port of Entry construction contractor and the Imperial County Roads Department. Specific construction procedures will be evaluated to determine appropriate schedules to minimize adverse effects on the pipeline and Port of Entry projects as well as the public in the surrounding area. Procedures and practices for avoiding significant impacts and conflicts will be developed. These construction procedures and practices for the revised border crossing will be specified by the Gas Company and followed by the pipeline construction contractor.

Both the proposed pipeline segment and the Port of Entry facilities are scheduled to go into operation in July 1995. Additional construction is projected for the Port of Entry and ancillary facilities (ESA 1993). Once the proposed pipeline segment is installed and in operation, no additional impacts are anticipated that would be related to either operation or future build-out of the Port of Entry.

C. *CUMULATIVE IMPACTS*

Potential cumulative impacts of these aforementioned projects that could be expected on resources assessed in this Modified EA are described below.

Land Use. The land uses of the area would not be significantly altered by the cumulative effects of the proposed revised border crossing location portion of the pipeline project, the power line, irrigation canal, and other road projects planned in the vicinity. Operation of the Port of Entry would substantially change regional uses. The minor maintenance activities associated with operation of the proposed pipeline would have only a negligible additive effect on land uses.

Socioeconomic Considerations. The proposed revised pipeline border location crossing and cumulative impacts would potentially add incrementally to socioeconomic impacts associated with construction in the Imperial Valley. The potential negative impacts on available temporary housing would be exacerbated if the Port of Entry, power line, irrigation canal, or road improvement projects require importation of workers during times that coincide with peak construction of the proposed revised pipeline border crossing.

The initial Port of Entry construction, IID canal project, and Imperial County road improvement projects are expected to coincide with project construction. These construction workers would have minor impacts on local housing availability. Cumulative projects would contribute to beneficial impacts on employment, income, local trade, and tax revenues.

Visual Quality. The proposed revised border crossing location portion of the pipeline project and irrigation canal would not significantly increase cumulative impacts to visual quality. The Southern Arizona Transmission Line project and the new Port of Entry would increase the regional cumulative visual quality impacts. The latter, in particular, would affect the rural aspect of the region.

Traffic. Construction of the revised pipeline border crossing, power line, and irrigation projects would not significantly increase cumulative traffic in the area. Operation of these projects would have negligible traffic impacts. Operation of the new Port of Entry could have substantial traffic impacts, which would be mitigated by associated highway improvements.

Vegetation and Wildlife. The proposed revised border crossing location portion of the gas pipeline project and other regional development might result in repeated disturbance that could keep vegetation in arrested seral development, alter animal behavior patterns, and prevent critical reproduction of species with low reproductive potential. In the instance of this revised pipeline border crossing, disturbance to habitat would be localized, temporary, and in an already disturbed area. These impacts would not be cumulatively

significant if appropriate mitigation measures are applied on a project-specific basis.

Geology, Soils, and Seismicity. The proposed revised pipeline border crossing and other local projects would not result in significant cumulative soils, seismic, or geologic impacts because of the limited amount of required grading activities and the level topography.

Hydrology. No significant cumulative hydrologic impacts would be created as a result of the proposed revised pipeline border crossing or other regional projects.

Noise. Noise impacts from construction activities associated with the revised pipeline border crossing project along with cumulative regional development could result in cumulative short-term impacts. Noise impacts from blowdown events associated with the revised pipeline border crossing location project could result in a cumulative short-term impact. Because the probability of overlapping activities is low, this is not considered significant.

Air Quality. The ROG, NO_x, and PM_{10} emissions associated with construction activities of the proposed revised pipeline border crossing, the irrigation canal/reservoir, and local road improvements could exceed established regulatory thresholds in the short-term. However, no long-term air quality impacts are expected through operation of these projects.

Cultural Resources. The revised border crossing location portion of the pipeline project and other regional development would not incrementally impact cultural resources in the project region.

Paleontological Resources. Excavation of the pipeline trench for the revised pipeline border crossing, in combination with other past, current, and future developments in the pipeline vicinity, would not contribute significantly to the loss of fossiliferous rocks and fossil sites that can be investigated for fossil remains because of the low potential for disturbance.

Health and Safety. Construction of the proposed IID interceptor canal and the Port of Entry projects are expected to coincide with the gas pipeline project construction. No significant cumulative impacts are expected on health and safety. This finding is based upon the mitigation measures provided by the project regarding pipeline location, construction, and operation. The pipeline would not be transmitting natural gas during this construction period. Operation of the other proposed facilities would not conflict with operation of the pipeline project.

D. GROWTH INDUCEMENT

Revised Pipeline Border Crossing Location

The revised pipeline border crossing location portion of the project would facilitate the replacement of the existing propane gas delivery system in Mexicali. The increased reliability of the proposed delivery system compared with the existing gas delivery system in Mexicali may contribute to growth in Mexicali.

Port of Entry

The revised pipeline border crossing location portion of the project would be one of a number of infrastructure improvements necessary for growth in the region. The international Port of Entry could stimulate growth on both sides of the border. The Port of Entry is proposed to handle commercial vehicle traffic between the Imperial Valley and Baja California. Other infrastructure improvements that would be necessary to accommodate growth include improved water systems, sanitary sewer pipeline and treatment systems, electricity, and roadway systems.

North American Free Trade Agreement

In addition to the revised border crossing location portion of the pipeline project, the recently ratified North American Free Trade Agreement (NAFTA) could result in environmental impacts on the region. The implications of NAFTA approval on the physical and cultural environment of the Imperial Valley are not known.

The State of California Employment Development Department (Annual Planning Information, Imperial County, June 1992) has the following observations regarding the economic growth inducement of NAFTA:

> "The North American Free Trade Agreement (NAFTA), which has yet to be ratified by Congress, is expected to be in operation by 1995. NAFTA, which will bring into being a Common Market composed of the United States, Canada, and Mexico will, in the view of some people in Imperial County, send some jobs over the border into Mexico including agricultural installations and retail operations, thereby reducing employment in Imperial County. However, as the effect of NAFTA on the economy of Imperial County cannot be gauged at all accurately until it starts, it was not taken into account when making this forecast."

Growth projections in the Imperial County General Plan assume some development in Mexicali. The growth-inducing effects of NAFTA may or may not be significant.

VI. REFERENCES

A. LITERATURE CITED

American Automobile Association (AAA). 1993. California and Nevada Tour Book.

Bureau of Land Management (BLM). 1988. National Environmental Policy Act Handbook (H-1790-1). Bureau of Land Management, Washington, D.C.

California Air Resources Board (CARB). 1989, 1990, 1991. California Air Quality Data.

California Natural Diversity Data Base (CNDDB). 1993. California Department of Fish Game, Sacramento, CA.

Environmental Science Associates, Inc. (ESA). 1993. Calexico East Border Station and State Route 7 Between the New Port of Entry and State Route 98: Environmental Impact Statement/Environmental Impact Report. U.S. General Services Administration, Region 9, San Francisco, CA. 377 pp. plus appendices.

Imperial County Planning/Building Department, October 1990. Imperial County General Plan's Seismic/Safety Plan.

LSA Associates, Inc. (LSA). 1989. Environmental Assessment, Southern California Gas Company Natural Gas Transmission Line 5000: Colorado River to Ford Dry Lake. Bureau of Land Management, Riverside, CA.

LSA Associates, Inc. (LSA). 1993. Biological Assessment, Southern California Gas Company Natural Gas Transmission Line 6902: Riverside and Imperial Counties, California. Bureau of Land Management, Riverside, CA.

Soil Conservation Service (SCS). 1981. U.S. Department of Agriculture, Soil Survey of Imperial County, California, Imperial Valley Area.

South Coast Air Quality Management District, September 1992. CEQA Air Quality Handbook, Final Draft.

U.S. Geological Survey (USGS). 1956, Holtville West Quadrangle (photorevised 1979); and 1957, Calexico Quadrangle.

B. PERSONS CONTACTED DURING REPORT PREPARATION

Adams, Jim, District Pipeline Manager, Desert Transmission Region, The Gas Company, Beaumont, CA.

Chamberlain, Michael E., The Gas Company, Los Angeles, CA.

Chemberlen, Tom L., Manager of Special Projects, Transmission and Storage Operations, The Gas Company, Los Angeles, CA.

Davenport, Arthur, Fish and Wildlife Biologist, U.S. Fish and Wildlife Service, Carlsbad Field Office, Carlsbad, CA.

Gafford, William R., Right-of-Way Coordinator, Engineering and Operations Support, The Gas Company, Los Angeles, CA.

Gilmore, David J., Attorney, Law Department, The Gas Company, Los Angeles, CA.

Gray, Bob, Construction Engineer Coordinator, Imperial County, El Centro, CA.

Groot, John M., The Gas Company, Los Angeles, CA.

Harris, Elliott H., Senior Engineer, Environment and Safety Department, The Gas Company, Los Angeles, CA.

Hull, Ron, Public Information Director, Energy Division, Imperial Irrigation District.

Ibarra, Miguel, Engineer, Gerencia de Operacion du Ductos y Terminales, Pemex Gas y Petroquimica, Mexico City, Mexico.

Johnson, Stephen L., Special Projects Manager, Bureau of Land Management, California Desert District, Riverside, CA.

King, Mike, Assistant Project Manager, Water Division, Imperial Irrigation District.

Knapp, H. Bruce, Pipeline Superintendent, Desert Transmission Region, The Gas Company, Victorville, CA.

Manson, Craig, Chief Counsel, California Department of Fish and Game, Sacramento, CA.

Mitchell, Michael, Archaeologist, Bureau of Land Management, Palm Springs Resource Area, Palm Springs, CA.

Medina, Jorge Ahumada, Engineer, Subgerente de Gas Natural Z. N., Pemex Gas y Petroquimica, Monterrey, N. L., Mexico.

Padleschat, Joyce A., Attorney, Law Department, The Gas Company, Los Angeles, CA.

Queen, Rolla, District Archaeologist, Bureau of Land Management, California Desert District, Riverside, CA.

Smith, Bob, District Pipeline Supervisor, Desert Transmission Region, The Gas Company, Blythe, CA.

Streich, J.E, Pipeline Coordinator, Desert Transmission Region, The Gas Company, Beaumont, CA.

Sudduth, Dee, Environmental Services Specialist, California Department of Fish and Game, Jamul, CA.

Tanner, Charles B., District Engineer, Desert Transmission Region, The Gas Company, Victorville, CA.

von Werlhof, Jay, Archaeological Information Center, Imperial Valley College, Brawley, CA.

Wells, Chris, California Division of Mines and Geology, Pleasant Hill Office, Pleasant Hill, CA.

C. PERSONS PARTICIPATING IN THE PREPARATION OF THIS REPORT

LSA Associates, Inc.

Roger D. Harris, Project Manager/Vegetation and Wildlife
M.S., Wildlands Resource Science, U.C. Berkeley
B.A., Biology, U.C. Berkeley
13 years experience

Patricia Hogg, Assistant Project Manager - Land Use, Visual Resources, Geology, and Hydrology.
B.A., Geological Sciences, U.C. Santa Barbara
B.A., Physical Geography, U.C. Santa Barbara
4 years experience

Benson Lee, Health and Safety
M.A., Geography, San Francisco State University
B.A., Geography, San Francisco State University
15 years experience

Geoffrey Hornek, Air Quality
M.S., Applied Physics, U.C. Davis
B.A., Physics, Queens College, NY, NY
11 years experience

Michael Weber, Noise
B.S., Animal Physiology, U.C. Davis
3 years experience

James Fine, Socioeconomic Considerations
B.S., Economics, University of Pennsylvania, Philadelphia
2 years experience

APPENDIX A:
FERC REPORT

[¶ 61,277]

Southern California Gas Company, Docket No. CP94-207-000

Order Approving NGA Section 3 Authorization and Issuing Presidential Permit

(Issued September 1, 1994)

Before Commissioners: Elizabeth Anne Moler, Chair; Vicky A. Bailey, James J. Hoecker, William L. Massey, and Donald F. Santa, Jr.

On February 1, 1994, Southern California Gas Company (SoCalGas) filed an application, supplemented on April 29, 1994, requesting authorization pursuant to section 3 of the Natural Gas Act (NGA) and a Presidential Permit[1] for the siting, construction, operation, maintenance, and connection of certain pipeline and metering facilities at the international boundary of the United States and Mexico at Calexico, California. The proposed natural gas transmission facilities will permit SoCalGas to export up to 40 MMcf of gas per day.

On May 24, 1994, the Commission sent a copy of the SoCalGas application and a draft Presidential Permit to the Secretary of State and the Secretary of Defense for their recommendations. Replies on behalf of the Secretary of State dated June 7, 1994, and on behalf of the Secretary of Defense dated June 13, 1994, indicate no objection to the issuance of the Presidential Permit as described.[2]

We will issue the Presidential Permit and grant NGA section 3 authorization, as requested.

Background and Proposal

SoCalGas proposes to construct (1) a metering station consisting of one 8-inch diameter turbine meter run and one 12-inch diameter turbine meter run, and (2) 900 feet of 16-inch diameter pipeline extending from the meter station to the border.[3] The proposed export facilities will have a capacity of 40 MMcf of gas per day and will connect SoCalGas' non-jurisdictional local distribution company (LDC) system[4] to the facilities of Petroleos Mexicanos (Pemex).[5] SoCalGas estimates the border-crossing facilities will cost approximately $350,000.

SoCalGas states that the gas transported via its proposed export facilities will serve existing and new gas requirements in the City of Mexicali, Mexico. SoCalGas anticipates that end-users will include Gas B.P., which provides local distribution service of propane air to the City of Mexicali, Mexico. SoCalGas claims that, in response to safety concerns, Gas B.P. intends to remove propane tanks now located in a densely populated area and replace propane-air service with natural gas service. In addition, SoCalGas states that industrial users in Mexicali may elect to switch to natural gas, which SoCalGas anticipates would reduce air pollution in the Calexico/Mexicali region.

Export Authorization

Since the shippers have not yet been identified, no applications for export authorization have been filed with the United States Department of Energy, Office of Fossil Energy (DOE/FE). However, SoCalGas states that the entity holding title to the gas at the international boundary will be responsible for obtaining the necessary NGA section 3 authorization from DOE/FE.

---

[1] Executive Order No. 10485, 18 Fed. Reg. 5397 (September 9, 1953), requires that the Commission obtain the favorable recommendations of the Secretary of State and the Secretary of Defense prior to issuing a Presidential Permit.

[2] The Presidential Permit is attached as appendix B.

[3] SoCalGas' initial application contained two alternative proposals for the route and siting of the export facilities. On April 29, 1994, SoCalGas notified the Commission that it had selected the alternative specified herein.

[4] SoCalGas is a Hinshaw pipeline, exempt from Commission jurisdiction under NGA section 1(c). 13 FPC 1233 (1954). In addition to the proposed export facilities at issue in this docket, SoCalGas states that it intends to construct approximately 31.2 miles of non-jurisdictional pipeline in order to connect its existing distribution system to the export facilities. SoCalGas explains that the gas volumes to be transported to Mexico constitute a portion of its "Project Vecinos," a joint project with San Diego Gas and Electric Company (San Diego) to provide gas transportation to Mexico. 64 FERC ¶ 61,221 (1993), *order denying reh'g*, 65 FERC ¶ 61,299 (1993).

[5] Pemex is the state-owned oil and gas company in Mexico charged with, among other things, the responsibility for the transportation of natural gas in Mexico.

Notice and Interventions

Notice of SoCalGas' application was published in the *Federal Register* on February 14, 1994 (59 Fed. Reg. 6955). Timely, unopposed motions to intervene were filed by sixteen parties.[6] Texaco Gas Marketing Inc. (TGMI) filed an untimely motion to intervene; however, TGMI already is a party, having previously filed a timely motion to intervene jointly with Texaco Inc. No other motions, notices of intervention, or protests were filed in this proceeding.

The Public Utility Commission of the State of California's (CPUC) intervention expresses support for SoCalGas' proposal and, in addition, requests that the Commission clarify that SoCalGas' proposal will not affect its status as an NGA-exempt Hinshaw pipeline.

Discussion

Pursuant to section 3 of the NGA and authority delegated by the Secretary of Energy, SoCalGas' proposal to construct and operate pipeline facilities at the international border of the United States and Mexico for the export of natural gas is subject to the jurisdiction of the Commission.[7]

SoCalGas' application before this Commission requests authorization for the siting, construction, operation, maintenance, and connection of border-crossing facilities to transport export volumes to be authorized by DOE/FE. We have reviewed SoCalGas' application and find that SoCalGas' proposal is not inconsistent with the public interest, provided that SoCalGas adheres to the proposed construction procedures described in its application and its April 29, 1994 supplement. As noted above, in response to the Commission's letters, the Secretary of State and the Secretary of Defense have indicated they have no objection to SoCalGas' proposal. Thus, we will grant SoCalGas' request for NGA section 3 authorization, as proposed, and issue the Presidential Permit.[8]

The CPUC requests clarification regarding the effect of SoCalGas' proposal to transport gas for export upon SoCalGas' NGA-exempt Hinshaw pipeline status, since NGA section 1(c) provides that all gas that a Hinshaw pipeline receives from another state at or within the boundary of the Hinshaw pipeline's state must be ultimately consumed within the Hinshaw pipeline's state.[9] We have previously determined that a Hinshaw pipeline's transportation of gas volumes for export to and ultimate consumption in a foreign country involve only foreign, and not interstate, commerce.[10] While a Hinshaw pipeline engaged in the export of gas is obliged to comply with NGA section 3 regulations, the Commission's NGA section 7 jurisdiction does not attach to foreign commerce. Therefore, SoCalGas' proposal will not affect its status as an NGA-exempt Hinshaw pipeline.

SoCalGas recently completed its "Calexico Extension," a 7-mile-long, 16-inch-diameter pipeline, with appurtenances, which will connect the proposed border-crossing facilities to SoCalGas' existing LDC system. SoCalGas intends to use the Calexico Extension to transport gas volumes to serve its proposed border-crossing facilities and its existing California customers. SoCalGas concludes that the Calexico Extension will not be subject to NGA section 3 jurisdiction. We concur; Commission NGA section 3 authority is limited to approval of the site of SoCalGas' exportation and the construction, operation, and maintenance of the border facilities. Therefore, because the Commission's section 3 jurisdiction does not extend upstream of the facilities located at the international boundary, the Calexico Extension's rates, service, and facilities will be subject to regulation exclusively by the CPUC. SoCalGas anticipates serving future markets

[6] Timely, unopposed motions to intervene are granted by operation of rule 214 of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214. Parties to this proceeding are listed in appendix A.

[7] In Delegation Order No. 0204-112, 49 Fed. Reg. 6684 (February 22, 1984), the Secretary of Energy delegated to the Commission the authority to perform certain functions with respect to the regulation of imports and exports of natural gas. *See Yukon Pacific Corp.*, 39 FERC ¶ 61,216 (1987) and *Distrigas Corp. v. FPC*, 495 F.2d 1057 (D.C. Cir. 1974), *cert. denied*, 419 U.S. 834 (1974).

[8] We note that the Energy Policy Act of 1992, Pub. L. 102-486 (October 24, 1992), 106 Stat. 2776, amended section 3 of the NGA to specify that the importation and exportation of natural gas with "a nation with which there is in effect a free trade agreement requiring national treatment for trade in natural gas, shall be deemed to be consistent with the public interest, and applications for such importation or exportation shall be granted without modification or delay." A free trade agreement requiring national treatment for trade in natural gas is in effect between the United States and Mexico. North American Free Trade Agreement Implementation Act, Pub. L. 103-182 (December 8, 1993), 107 Stat. 2057; Implementation of the North American Free Trade Agreement Act, Executive Order No. 12889, 58 Fed. Reg. 69681 (December 30, 1993).

[9] *See San Diego and SoCalGas*, 64 FERC ¶ 61,221, at pp. 62,652-53 (1993), *on reh'g*, 65 FERC ¶ 61,299, at p. 62,386 (1993).

[10] *Michigan Consolidated Gas Company*, 48 FERC ¶ 61,300, at pp. 61,958-59 (1989), *on reh'g*, 50 FERC ¶ 61,010 (1990) and *San Diego and SoCalGas*, 64 FERC ¶ 61,221, at pp. 62,652-53 (1993), *on reh'g*, 65 FERC ¶ 61,299 (1993).

within California from the Calexico Extension; such service would also be beyond the Commission's purview under NGA section 3.

Environmental Assessment

In accordance with the provisions of the National Environmental Policy Act of 1969,[11] the Commission prepared an environmental assessment (EA) for SoCalGas' proposed construction of natural gas border-crossing facilities.[12] The EA addresses construction procedures, land use, erosion control and vegetation, waterbodies, soils, federally listed threatened or endangered species, cultural resources, and alternatives to the proposed project. The EA concludes that approval of the proposed border-crossing facilities would not constitute a major federal action significantly affecting the quality of the human environment, provided SoCalGas adheres to the construction procedures described in its application and its April 29, 1994 supplement.

Any state or local permits issued with respect to the facilities subject to this Commission's jurisdiction must be consistent with the conditions of any Commission authorization of construction and operation of those facilities. This does not mean, however, that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the force and effect of a certificate issued by this Commission.[13]

At a hearing held on August 31, 1994, the Commission on its own motion received and made a part of the record in this proceeding all evidence, including the applications as amended and exhibits thereto, submitted in support of the authorization sought herein, and upon consideration of the record, for the reasons stated above,

The Commission orders:

(A) SoCalGas is issued NGA section 3 authorization and a Presidential Permit for the siting, construction, operation, maintenance, and connection of the border-crossing facilities described in the body of this order, for the export to Mexico of up to 40 MMcf of gas per day.

(B) The authority granted in Ordering Paragraph (A) is conditioned upon SoCalGas' securing approval from the International Boundary and Water Commission prior to construction.

(C) SoCalGas shall sign and return the Testimony of Acceptance of all the provisions, conditions, and requirements of the Presidential Permit to the Secretary prior to construction.

Appendix A

Intervenors in Docket No. CP94-207-000

Amoco Production Company jointly with Amoco Energy Trading Corporation
Arizona Public Service Company jointly with Salt River Project Agricultural Improvement and Power District
Coastal Pan American Corporation
El Paso Natural Gas Company
Enron Gas Services Corporation jointly with Enron Access Corporation
Meridian Oil Inc.
Mobil Natural Gas Inc.
Pacific Gas and Electric Company
Pan-Alberta Gas Ltd.
Public Utilities Commission of the State of California
San Diego Gas and Electric Company
Southern California Edison Company
Southern California Utility Power Pool jointly with Imperial Irrigation District
Southwest Gas Corporation
Texaco Inc. jointly with Texaco Gas Marketing Inc.
Transwestern Pipeline Company

Appendix B

Permit Authorizing Southern California Gas Company to Construct, Operate, Maintain and Connect Natural Gas Facilities at the International Boundary Between the United States and Mexico

Federal Energy Regulatory Commission

Docket No. CP94-207-000

Southern California Gas Company (Permittee), a corporation organized and existing under the laws of the State of California, filed in Docket No. CP94-207-000 on February 1, 1994, an application pursuant to Executive Order Nos. 10485 and 12038 and the Secretary of Energy's Delegation Order No. 0204-112, for a Permit authorizing Permittee to construct, operate, maintain, and connect the natural gas transmission facilities described in Article 2

[11] 42 U.S.C. § 4321 *et seq.*

[12] The Commission's EA did not include consideration of the Calexico Extension because the United States Bureau of Land Management (BLM) had previously undertaken an EA for those facilities. In February 1994, the BLM concluded that the environmental impacts associated with the Calexico Extension would not be significant.

[13] *See, e.g., Schneidewind v. ANR Pipeline Company*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Commission*, 894 F.2d 571 (2d Cir. 1989); and *Iroquois Gas Transmission System, L.P., et al.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

below at the international boundary between the United States and Mexico.

By letter dated June 7, 1994, the Secretary of State, and by letter dated June 13, 1994, the Secretary of Defense, indicated no objection to the issuance of a Permit. The Federal Energy Regulatory Commission finds that the issuance of a Permit is appropriate and consistent with the public interest.

Pursuant to the provisions of Executive Order Nos. 10485 and 12038, dated September 3, 1953, and February 3, 1978, respectively, the Secretary of Energy's Delegation Order No. 0204-112, effective February 22, 1984, and the Commission's regulations, permission is granted to Permittee to construct, operate, maintain and connect the natural gas transmission facilities described in Article 2 below, upon the terms and conditions of the Permit.

Article 1. It is expressly agreed by the Permittee that the facilities herein described shall be subject to all provisions and requirements of this Permit. This Permit may be modified or revoked by the President of the United States or the Federal Energy Regulatory Commission, and may be amended by the Federal Energy Regulatory Commission, upon proper application therefor.

Article 2. The following facilities are subject to this Permit:

A natural gas transmission pipeline consisting of meters and approximately 900 feet of 16-inch-diameter pipeline, with a capacity of 40 MMcf of gas per day, extending from a meter station at the terminus of Permittee's local distribution system at Calexico, in Imperial County, California, to the international boundary between the United States and Mexico at Calexico.

Article 3. The natural gas facilities authorized herein, or which may subsequently be included herein by modification or amendment, may be utilized for the transportation of natural gas from the United States to Mexico only in the amount, at the rate, and in the manner authorized under section 3 of the Natural Gas Act.

Article 4. The construction, operation, maintenance, and connection of the aforesaid facilities shall be subject to the inspection and approval of representatives of the United States. The Permittee shall allow officers and employees of the United States, showing proper credentials, free and unrestricted access to the land occupied by the facilities in the performance of their official duties.

Article 5. If in the future it should appear to the Secretary of the Army that any facilities or operations permitted hereunder cause unreasonable obstruction to the free navigation of any of the navigable waters of the United States, the Permittee may be required, upon notice from the Secretary of the Army, to remove or alter the same so as to render navigation through such waters free and unobstructed.

Article 6. The Permittee shall be liable for all damages occasioned to the property of others by the operation or maintenance of the facilities, and in no event shall the United States be liable therefor. The Permittee shall do everything reasonable within its power to prevent or suppress fires on or near land occupied under this Permit.

Article 7. The Permittee agrees to file with the Commission, under oath and in such detail as the Commission may require, such statements or reports with respect to the natural gas exported or the facilities described herein, as the Commission may, from time to time, request. Such information may be made available to any federal, state, or local agency requesting such information.

Article 8. Neither this Permit nor the facilities, nor any part thereof, covered by this Permit shall be voluntarily transferred in any manner. However, the Permit shall continue in effect temporarily for a reasonable time in the event of the involuntary transfer of the facilities by operation of law (including transfer to receivers, trustees, or purchasers under foreclosure or judicial sale) pending the making of an application for a permanent Permit and decision thereon, provided notice is promptly given in writing to the Commission accompanied by a statement that the facilities authorized by this Permit remain substantially the same as before the involuntary transfer. The Permittee shall maintain the facilities in a condition of repair for the efficient transportation of natural gas and shall make all necessary renewals and replacement.

Article 9. Upon the termination, revocation, or surrender of this Permit, the transportation facilities herein authorized shall be removed within such time as the Commission may specify, and at the expense of the Permittee. Upon failure of the Permittee to remove such transportation facilities or any portion thereof, the Commission may direct that possession of the same be taken and the facilities be removed, at the expense of the Permittee, and the Permittee shall have no claim for damages by reason of such possession or removal.

Article 10. The Permittee agrees that when, in the opinion of the President of the United States, evidenced by a written order addressed to it as holder of this Permit, the safety of the United States demands it, the United States shall have the right to enter upon and take possession of any of the facilities, or parts

thereof, maintained or operated under this Permit, and all contracts covering the transportation or sale of natural gas by means of said facilities, to retain possession, management, and control thereof for such length of time as may appear to the President to be necessary to accomplish said purposes, and then to restore possession and control to the Permittee; and in the event that the United States shall exercise such right it shall pay the Permittee just and fair compensation for the use of said facilities upon the basis of a reasonable profit in time of peace, and the cost of restoring said facilities to as good condition as existed a the time of taking over thereof, less the reasonable value of any improvements that may be made thereto by the United States and which are valuable and serviceable to the Permittee.

Article 11. This Permit is subject to any action which the Government of the United States may in the future deem expedient or necessary to take in case any part of the aforesaid facilities comes into the control of any foreign government.

Article 12. The Government of the United States shall be entitled to the same or similar privileges as may by law, regulation, agreement, or otherwise, be granted by the Permittee to any foreign government.

In Testimony of Acceptance of all the provisions, conditions and requirements of this Permit, the Permittee this day of ————, 1994, has caused its name to be signed by ———— ————, pursuant to a resolution of its Board of Directors duly adopted on the ____ day of ____, 1994, a certified copy of the record of which is attached hereto.

Southern California Gas Company

By: ————

(Attest)

————

Executed in triplicate

[¶ 61,278]

National Fuel Gas Supply Corporation, Docket Nos. CP94-112-001 and CP88-94-009

Order on Rehearing

(Issued September 1, 1994)

Before Commissioners: Elizabeth Anne Moler, Chair; Vicky A. Bailey, James J. Hoecker, William L. Massey, and Donald F. Santa, Jr.

National Fuel Gas Supply Corporation (National Fuel) and Empire State Pipeline (Empire) filed requests for rehearing of a June 1, 1994 order in this proceeding.[1] That order, among other things, authorized National Fuel to construct and operate new facilities and to acquire and operate existing facilities in upstate New York. As discussed below, rehearing is granted in part, denied in part, and deferred in part.

Background

National Fuel requested authorization to acquire and construct certain facilities to interconnect its Line U in Tonawanda, New York with Empire's facilities on Grand Island, New York (Grand Island interconnect).[2] National Fuel proposed this interconnect to improve its system integrity for the greater Buffalo, New York area served by Line U, by creating an additional feed from the west.

National Fuel also requested authorization to amend a Natural Gas Act (NGA) section 7(c) certificate for firm transportation to add a new receipt and delivery point for Transco Energy Marketing Corporation (TEMCO). Essentially, National Fuel requested authorization to divert volumes of TEMCO's gas that National Fuel receives from TransCanada PipeLines, Ltd. (TransCanada) at the Niagara Spur Loop Line facilities at Lewiston, New York to Empire's interconnect with TransCanada at Chippawa, Canada. Empire would then transport the gas it received from TransCanada on National Fuel's account to the proposed

[1] *National Fuel Gas Supply Corp.*, 67 FERC ¶ 61,270 (1994).

[2] National Fuel's Line U is a 12-inch pipeline that flows westerly from National Fuel's Gunnville Road Station, in an eastern suburb of Buffalo. National Fuel delivers gas through Line U at various delivery points to its affiliate, National Fuel Gas Distribution Corp. (Distribution), a local distribution company. Line U currently is operating near capacity.

APPENDIX B:
PEMEX ANNOUNCEMENTS

PGPB-SGNA/FORMA No 3

PEMEX
GAS Y PETROQUIMICA BASICA

SUBDIRECCION DE GAS NATURAL Y AZUFRE
GERENCIA DE OPERACION DE DUCTOS Y TERMINALES

México, D.F. a 30 de Noviembre de 1994.

OFICIO No. GODT-01933 /94.

SR. FRANCISCO R. HERRERA,
MANAGER OF INTERNATIONAL RELATIONS,
SAN DIEGO GAS & ELECTRIC COMPANY,
P. O. BOX 1831 SAN DIEGO, CALIFORNIA

Sr. Herrera:

Después de estudios topográficos completos en Mexicali, B.C., asociados con el proyecto de suministro de gas natural, hemos determinado el punto de interconexión en la frontera México-EEUU. Adjunto a este documento, usted encontrará un diagrama que localiza este punto específico, mostrando la posición exacta de acuerdo con el sistema de coordenadas.

Esta información se entrega de acuerdo con el anexo "A" de la Carta de Intención, fechada el 13 de octubre de 1994, asi como con sus cartas fechadas el 17 de octubre y el 21 de octubre de 1994.

Esperando que estos datos sean útiles para propósitos de construcción y programación, quedo de usted.

Atentamente,

ING. SERGIO CASTRO MARTINEZ
GERENTE.

c.c.p.- Dr. José Luis Alberro Semerena.- Director Pemex-Gas y Petroquímica Básica.
c.c.p.- Lic. Pedro Carlos Gómez Flores.- Subdirector de Gas Natural y Azufre.

JRAS'mecm.

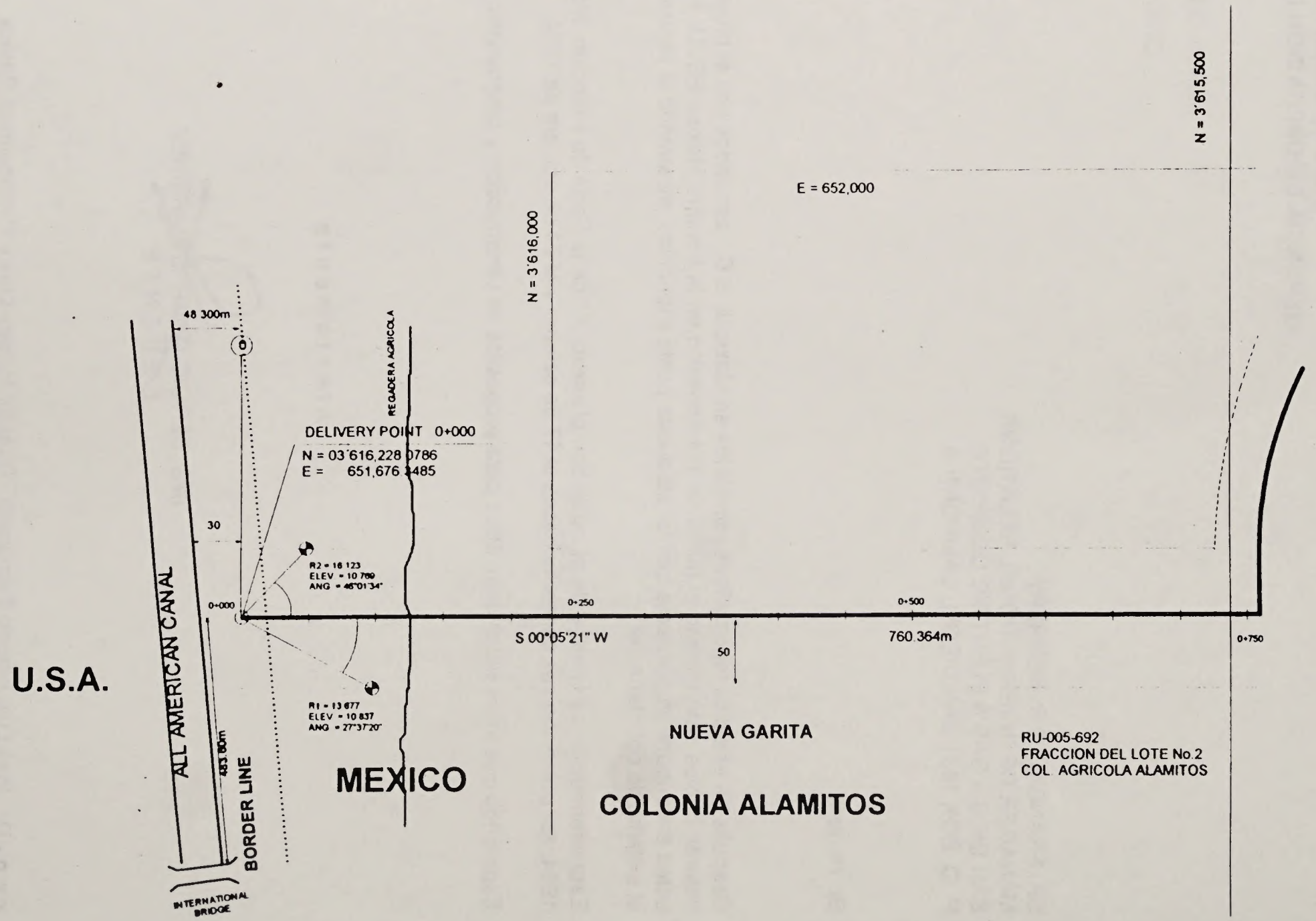
Av. Ejercito Nacional. 216 Piso 13
Col. Anzures, México. D.F.
C.P. 11311

Tels.: 203-30-52, 203-32-61 y 203-45-18
Fax: 203-02-83
Conmutador: 250-26-11, Exts.: 323-38 y 323-41

PEMEX
GAS Y PETROQUIMICA BASICA

SUBDIRECCION DE GAS NATURAL Y AZUFRE
GERENCIA DE OPERACION DE DUCTOS Y TERMINALES

PIPELINE INTERCONNECTION MEXICALI B.C.



PGPB-SGNA/FORMA No 3

PEMEX
GAS Y PETROQUIMICA BASICA

SUBDIRECCION DE GAS NATURAL Y AZUFRE
GERENCIA DE OPERACION DE DUCTOS Y TERMINALES

México, D.F. a 30 de Noviembre de 1994.

OFICIO No. GODT- /94.

0193

MR. FRANCISCO R. HERRERA,
MANAGER OF INTERNATIONAL RELATIONS,
SAN DIEGO GAS & ELECTRIC COMPANY,
P. O. BOX 1831 SAN DIEGO, CALIFORNIA

Mr. Herrera:

After complete topographical studies in Mexicali, B.C., associated with the natural gas supply project, we have determined the interconnection point at the Mexican-American border. Attached to this document, you will find an outline locating this specific point, with the exact position shown according to the coordinate system.

This information is provided accordingly with exhibit A of the letter of intent, dated October 13th, 1994, as well as your letters dated October 17th, and October 21st, 1994.

Hoping this data will be most useful for construction and scheduling purposes, I remain.

Truly yours,

ING. SERGIO CASTRO MARTINEZ
GERENTE.

c.c.p.- Dr. José Luis Alberro Semerena.- Director Pemex-Gas y Petroquímica Básica.
c.c.p.- Lic. Pedro Carlos Gómez Flores.- Subdirector de Gas Natural y Azufre.

JRAS'mecm.

Av. Ejercito Nacional. 216 Piso 13
Col. Anzures, México, D.F.
C.P. 11311

Tels.: 203-30-52, 203-32-61 y 203-45-18
Fax: 203-02-83
Conmutador: 250-26-11, Exts.: 323-38 y 323-41

PEMEX

PETROLEOS MEXICANOS

SUBDIRECCION DE GAS NATURAL Y AZUFRE

GERENCIA DE OPERACION DE DUCTOS Y TERMINALES

INTEGRACION DE LA RED DE GAS NATURAL

ESTADO DE CHIAPAS

ESCALA GRAFICA

0 10 20 30 40 50 60 70 80 90 100 KILOMETROS

SIMBOLOGIA

- GASODUCTO EN OPERACION
- GASODUCTO EN CONSTRUCCION
- GASODUCTO EN PROYECTO
- CENTRO DE CONSUMO
- CENTRO DE CONSUMO EN PROYECTO
- CENTRO DE CONSUMO EN CONSTRUCCION
- CENTRO DE CONSUMO EN OPERACION
- PLANTA DE COMPRESION
- PLANTA DE COMPRESION EN PROYECTO
- PLANTA DE COMPRESION EN CONSTRUCCION
- PLANTA DE COMPRESION EN OPERACION
- ESTACION DE MEDICION
- ESTACION DE MEDICION EN PROYECTO
- ESTACION DE MEDICION EN CONSTRUCCION
- ESTACION DE MEDICION EN OPERACION
- ESTACION DE REGULACION
- ESTACION DE REGULACION EN PROYECTO
- ESTACION DE REGULACION EN CONSTRUCCION
- ESTACION DE REGULACION EN OPERACION
- ESTACION DE REGULACION Y MEDICION
- ESTACION DE REGULACION Y MEDICION EN PROYECTO
- ESTACION DE REGULACION Y MEDICION EN CONSTRUCCION
- ESTACION DE REGULACION Y MEDICION EN OPERACION
- LIMITE ESTATAL
- LIMITE INTERNACIONAL

PEMEX

APPENDIX C:
POTENTIALLY OCCURRING SPECIAL STATUS SPECIES

Appendix C - Potentially Occurring Special Status Species
SoCalGas Revised Border Crossing Location
Imperial County, California

	ENGLISH NAME	SCIENTIFIC NAME	STATUS
Plants			
	Pierson's Milk-vetch	*Astragalus magdalanae* var. *piersonii*	F2,CE, CNPS1b
	Foxtail Cactus	*Coryphantha vivipara* var. *alversonii*	F2, CNPS1b
	Winged Cryptantha	*Cryptantha holoptera*	CNPS4
	California Ditaxis	*Ditaxis californica*	F2, CNPS1b
	California Barrel Cactus	*Ferocactus acanthodes* var. *acanthodes*	F2, CNPS3
	Algodunes Dunes Sunflower	*Helianthus niveus tephrodes*	F2, CE, CNPS1b
	Spearleaf	*Matela parvifolia*	F2, CNPS2
	Munz's Cholla	*Opuntia munzii*	F2, CNPS1b
	Wiggin's Cholla	*Opuntia wigginsii*	F2, CNPS1b
	Giant Spanish Needle	*Palafoxia arida gigantia*	F2, CNPS1b
	Sand Food	*Pholisma sonorae*	F3c, CNPS1b
	Needle's Knotweed	*Polygonum fusiforme*	F2
	Orocopia Sage	*Salvia greatai*	F2, CNPS1b
	Orcutt's Woody-Aster	*Xylorhiza orcuttii*	F2, CNPS1b
Amphibians			
	Yavapi Leopard Frog	*Rana yavapaiensis*	F2
	Couch's Spadefoot Toad	*Scaphiopus couchii*	CSC
	Colorado River Toad	*Bufo alvarinus*	CSC
Reptiles			
	Flat-tailed Horned Lizard	*Phrynosoma mcallii*	F1, CSC
	Co. Desert Fr.-toed Lizard	*Uma notata notata*	F2, CSC
Birds			
	Western Least Bittern	*Ixobrychus exilis hesperis* (nesting)	F2, CSC
	White-faced Ibis	*Plegadis chihi*	F2, CSC
	Wood Stork	*Mycteria americana*	CSC
	Fulvous Whistling Duck	*Dendrocygna bicolor* (breeding)	F2, CSC
	Ferruginous Hawk	*Buteo regalis* (wintering)	F2, CSC
	Golden Eagle	*Aquila chrysaetos* (breeding and winter)	CSC, CFP
	Prairie Falcon (nesting)	*Falco mexicanus*	CSC
	California Black Rail	*Laterallus jamaicensis coturniculus*	CT, F2 CFP
	Yuma Clapper Rail	*Rallus longirostris yumanensis*	FE, CT, CFP
	Western Snowy Plover	*Charadrius alexandrinus nivosus* (breeding/interior population)	CSC
	Mountain Plover	*Charadrius montanus*	F2, CSC
	Long-billed Curlew	*Numenius americanus*	F3C, CSC
	Burrowing owl	*Speotyto (= Athene) cunicularia*	CSC
	Gila Woodpecker	*Melanerpes uropygialis*	CE
	Vermilion Flycatcher	*Pyrocephalus rubrinus*	CSC

ENGLISH NAME	SCIENTIFIC NAME	STATUS
Black-tailed Gnatcatcher	*Polioptila melanura*	CSC
Crissal Thrasher	*Toxostoma crissale*	CSC
LeConte's Thrasher	*Toxostoma lecontei*	CSC
Loggerhead Shrike	*Lanius ludovicianus*	CSC, F2
Sonoran Yellow Warbler	*Dendroica petechia sonorana* (nesting)	CSC
Yellow-breasted Chat	*Icteria virens* (nesting)	CSC
Mammals		
Spotted Bat	*Euderona maculatum*	CSC, F2
California Leaf-nosed Bat	*Macrotus californicus*	CSC
Occult Little Brown Bat	*Myotis lucifugus occultus*	CSC, F2
Pocketed Free-tailed Bat	*Nyctinomops (= Tadarida) femorosacca*	CSC
Pale Big-eared Bat	*Plecotus townsendii pallescens*	CSC
Yuma Cotton Rat	*Sigmodon hispidus eremicus*	CSC, F2
American Badger	*Taxidea taxis*	CSC

Sources: CNDDB (1993), ESA (1993), LSA (1993).

Status:

FE	Federally endangered.
FT	Federally threatened.
F1	Federal candidate category 1, indicating species for which information supports a proposal to list.
F2	Federal candidate category 2, indicating species for which conclusive data on biological vulnerability and threat are not currently available.
F3C	Too widespread and/or not threatened.
CE	California endangered.
CT	California threatened.
CSC	California species of special concern.
CFP	California fully protected.
CNPS1b	Plants rare, threatened, or endangered in California and elsewhere according to the California Native Plant Society.
CNPS2	Plants rare, threatened or endangered in California, but more common elsewhere.
CNPS3	Plants about which more information is needed; a review list.
CNPS4	Plants of limited distribution; a watch list.

APPENDIX D:
TERRESTRIAL VERTEBRATE SPECIES OBSERVED

Appendix D - Terrestrial Vertebrate Species Observed
SoCalGas Revised Border Crossing Location
Imperial County, California

ENGLISH NAME	SCIENTIFIC NAME	STATUS
Birds		
Double-crested cormorant	*Phalacrocorax auritus*	SC
Great blue heron	*Ardea herodias*	
Great egret	*Casmerodius albus*	
Snowy egret	*Egretta thula*	
Cattle egret	*Bubulcus ibis*	
Black-crowned Night Heron	*Nycticorax nycticorax*	
White-faced ibis	*Plegadis chihi*	SC, F2
Mallard	*Anas platyrhynchos*	HA
Common Merganser	*Mergus merganser*	HA
Turkey vulture	*Cathartes aura*	
Osprey	*Pandion haliaetus*	SC
Northern harrier	*Circus cyaneus*	SC
Sharp-shinned hawk	*Accipiter gentilis*	SC
Red-tailed hawk	*Buteo jamaicensis*	
Ferruginous hawk	*Buteo regalis*	SC
American kestrel	*Falco sparverius*	SC
American coot	*Fulica americana*	HA
Common moorhen	*Gallinula chloropus*	HA
Killdeer	*Charadrius vociferus*	
Gull species	*Larus* sp.	
Caspian tern	*Sterna caspia*	
Rock dove	*Columba livia*	I
Mourning dove	*Zenaida macroura*	HA
Common ground dove	*Columbina passerina*	
Greater roadrunner	*Geococcyx californianus*	
Burrowing owl	*Speotyto scunicularia*	SC
Belted kingfisher	*Ceryle alcyon*	
Northern flicker	*Colaptes auratus*	
Black phoebe	*Sayornis nigricans*	
Say's phoebe	*Sayornis saya*	
Cliff swallow[1]	*Hirundo pyrrhonota*	
Common raven	*Corvus corax*	
Blue-gray gnatcatcher	*Polioptila caerulea*	
Loggerhead shrike	*Lanius ludovicianus*	F2
European starling	*Sturnus vulgaris*	I
Savannah sparrow	*Passerculus sandwichensis*	

[1] Nest only.

ENGLISH NAME	SCIENTIFIC NAME	STATUS
Red-winged blackbird	*Agelaius phoeniceus*	
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	
Western meadowlark	*Sturnella neglecta*	
Brewer's blackbird	*Euphagus cyanocephalus*	
Great-tailed grackle	*Quiscalus mexicanus*	
House finch	*Carpodacus mexicanus*	
House sparrow	*Passer domesticus*	I
Mammals		
Audubon's (Desert) cottontail	*Sylvilagus audubonii*	HA
California ground squirrel	*Spermophilus beecheyi*	
Muskrat[2]	*Ondatra zibethicus*	HA,I
Raccon[3]	*Procyon lotor*	HA

Status:

F2 = Federal candidate, category 2 species;
SC = California species of special concern;
HA = Harvested (game) species;
I = Introduced to California.

[2] According to Imperial Irrigation District personnel.

[3] Tracks only.